

VW 80000

Auf einen Blick

Elektrische und elektronische Komponenten
von Fahrzeugen bis 3.5t

Der Normenbezug:

VW 80000

LV124

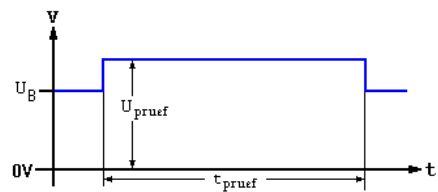
MBN LV124-1

BMW GS 95024-2-2

E-01: Langzeit Überspannungen

UB [V]: 14.0

U_pruef [V]: 17.0



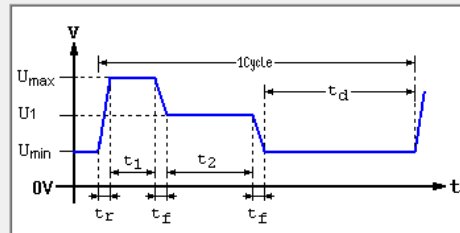
t_pruef [min]: 60.0

E-02: Transiente Überspannung

Umin [V]: 16.0

U1 [V]: 17.0

Umax [V]: 18.0



☐ Kurztest (Short test)

☐ Dauertest (Endurance test)

☒ Custom

tr [ms]: 1.0

t1 [ms]: 400.0

td [s]: 9.0

tf [ms]: 1.0

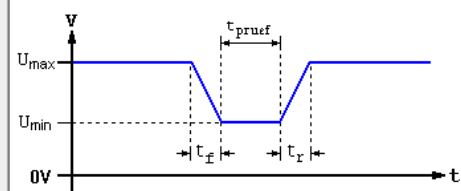
t2 [ms]: 600.0

Cycles: 1000.0

E-03: Transiente Unterspannung

Umax [V]: 10.8

Umin [V]: 9.0



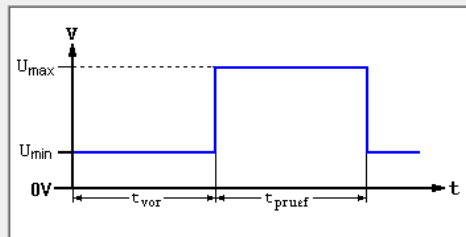
tr [ms]: 1.8

t_pruef [ms]: 500.0

tf [ms]: 1.8

E-04:
Jumpstart

U_{max} [V]: 26.0

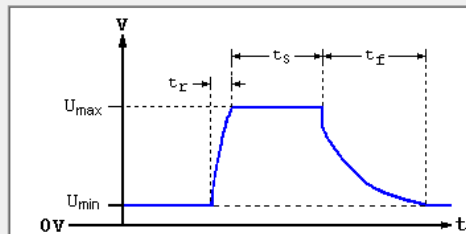
U_{min} [V]: 13.5

t_{vor} [s]: 60.0

t_{pruef} [s]: 60.0

E-05:
Load dump

U_{max} [V]: 27.0

U_{min} [V]: 13.5

R_i [Ohm] <= 0.1

t_r [ms]: 10.0

t_s [ms]: 300.0

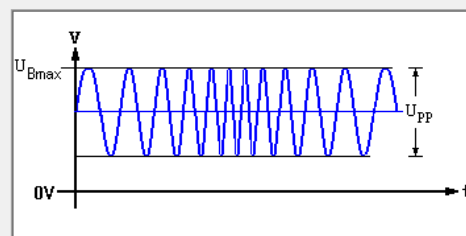
t_f [ms]: 20.0

E-06:
Überlagerte Wechselspannung

U_{Bmax} [V]: 16.0

U_{pp} [V]: 6.0

Cycles: 15.0

R_i [Ohm] <= 0.1

☐ Schaeffegrad (Severity) 1

☐ Schaeffegrad (Severity) 2

☒ Custom

t_{periode} [min]: 2.0
(wobble duration)

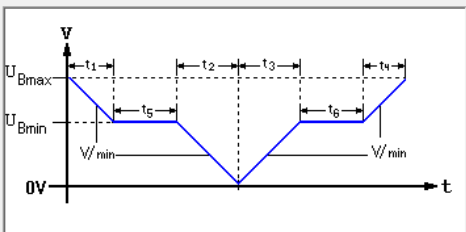
min. Frequenz [Hz]: 15.0
(minimum frequency)

t_{pruef} [min]: 30.0

max. Frequenz [kHz]: 30.0
(maximum frequency)

E-07:
Langsames Absenken - Anheben

U_{Bmax} [V]: 16.0

U_{Bmin} [V]: 9.0

t₁ [min]: 14.0

t₂ [min]: 18.0

t₃ [min]: 18.0

V / min: 0.5

t₄ [min]: 14.0

t₅ [s]: 10.0

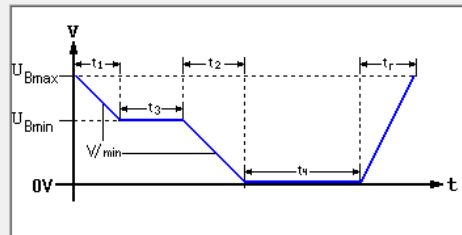
t₆ [s]: 10.0

E-08:

Langsam Absenken - schnell Erhöhen

UBmax [V]: 16.0

UBmin [V]: 9.0



V / min: 0.5

t1 [min]: 14.0

t2 [min]: 18.0

tr [s]: 0.5

t3 [s]: 10.0

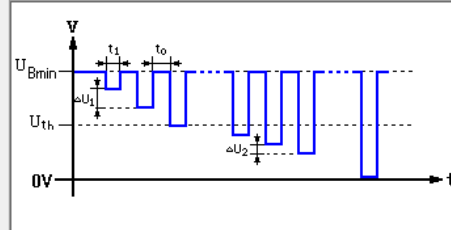
t4 [s]: 60.0

E-09:

Resetverhalten

UBmin [V]: 9.0

Uth [V]: 6.0



☐ Pruefablauf (Test sequence) 1

t0 [s]: 10.0

☐ Pruefablauf (Test sequence) 2

dU1 [V]: 0.5

t1 (P1) [s]: 5.0

☒ Pruefablauf (Test sequence) 1 + 2

dU2 [V]: 0.2

t1 (P2) [ms]: 100.0

E-10:

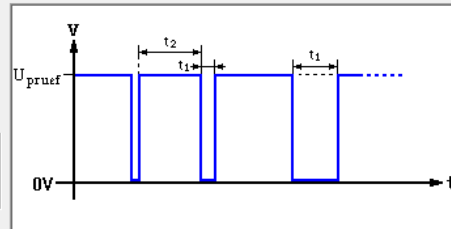
Kurzzeitunterbrechungen auf den Versorgungsleitungen

U_pruef [V]: 11.0

t2 [s]: 10.0

☒ Testfall (Test case) 1

☐ Testfall (Test case) 2



Zeitbereiche (Duration) t1 :

10.0 [μs]

100.0 [μs]

1.0 [ms]

10.0 [ms]

100.0 [ms]

2.0 [s]

Zeitschritte (Intervals) :

10.0 [μs]

100.0 [μs]

1.0 [ms]

10.0 [ms]

100.0 [ms]

E-11:

Startimpuls - Kaltstart

UB [V]: 11.0

UT [V]: 4.5

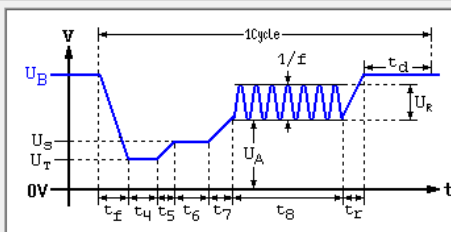
US [V]: 4.5

UA [V]: 6.5

UR [V]: 2.0

f [Hz]: 2.0

Ri [mΩhm] <= 10.0



Pruefimpuls (Test pulse)

☐ normal

☐ scharf (severe)

☒ Custom

tr [ms]: 100.0

t5 [ms]: 0.0

t8 [s]: 10.0

tf [ms]: 1.0

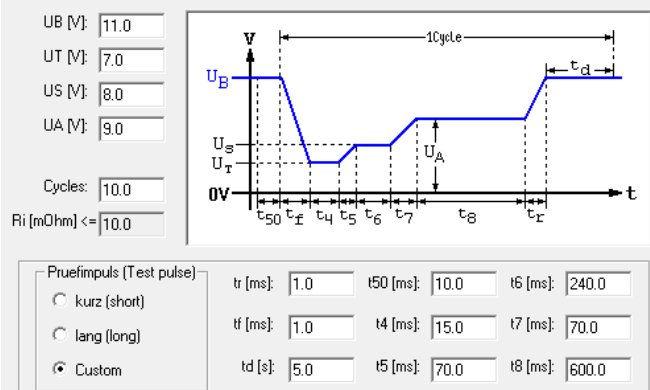
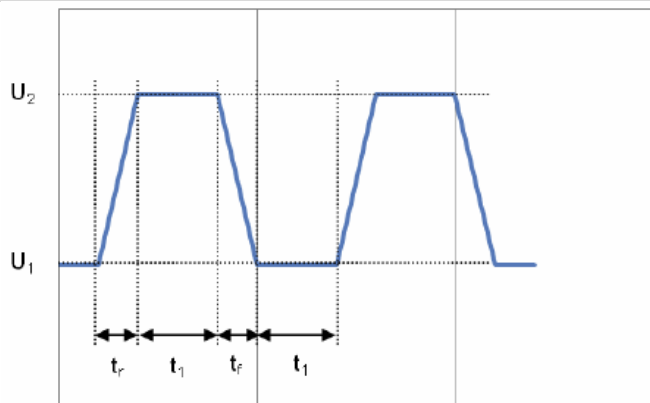
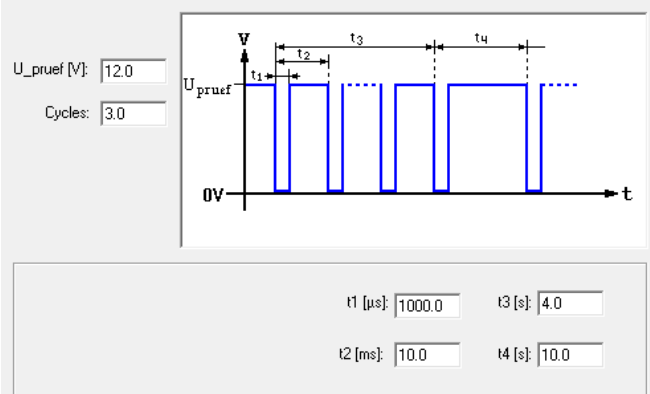
t6 [ms]: 19.0

td [s]: 2.0

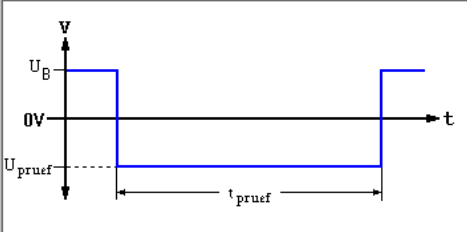
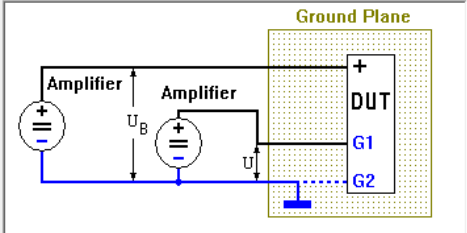
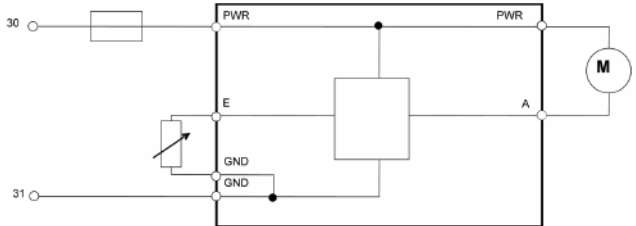
t4 [ms]: 0.0

t7 [ms]: 50.0

Cycles: 10.0

E-11:
Startimpuls - Warmstart

E-12:
*Spannungsverlauf
 Bordnetzregelung*

E-13:
*Kurzzeitunterbrechungen auf
 Signal- und Datenleitungen*

E-14:
Steckerunterbrechung

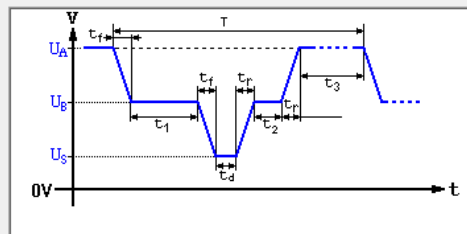
Under work

<p>E-15: Verpolung</p>	<div> <div> <div>UB [V]: <input type="text" value="14.0"/></div> <div>Ri [mOhm] <= <input type="text" value="100.0"/></div> </div> <div>  </div> <div> <div> <input type="radio"/> allgemein (general) <input type="radio"/> Halbleiter-Leistungsschalter (semiconductor circuit breaker) <input checked="" type="radio"/> Custom </div> <div> <div>U_pruef [V]: <input type="text" value="-14.0"/></div> <div>t_pruef [s]: <input type="text" value="60.0"/></div> </div> </div> </div>
<p>E-16: Masseversatz</p>	<div> <div>  </div> <div> <div>U [V]: <input type="text" value="1.0"/></div> <div>td [s]: <input type="text" value="10.0"/></div> <div>An einer Batterie oder zweiten Spannungsquelle ist UB anzulegen.</div> </div> </div>
<p>E-17: Kurzschluss auf Signal- und Lastleitungen</p>	
<p>E-18: Isolationswiderstand</p>	
<p>E-20: Durchschlagfestigkeit</p>	

BMW GS 95024-2-2
E-40:
Sehr kurzer Spannungseinbruch

 UA [V]:

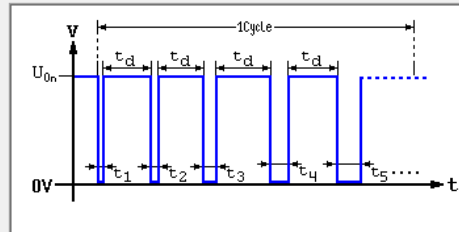
 UB [V]:

 Us [V]:


tf = tr [ms]:	<=	<input type="text" value="10.0"/>	t1 [s]:	<input type="text" value="10.0"/>	T [s]:	>=	<input type="text" value="20.0"/>
			td [s]:	<input type="text" value="0.1"/>			
			t2 [s]:	<input type="text" value="1.0"/>			

E-41:
Kurzes Aus / An für Busteilnehmer

 U_On [V]:

 Cycles:


t_ges [s]:	<input type="text" value="745.0"/>	t2 [s]:	<input type="text" value="1.0"/>	t5 [s]:	<input type="text" value="0.3"/>	t8 [s]:	<input type="text" value="0.0"/>
t_On [s]:	<input type="text" value="10.0"/>	t3 [s]:	<input type="text" value="0.5"/>	t6 [s]:	<input type="text" value="0.2"/>	t9 [s]:	<input type="text" value="0.0"/>
t1 [s]:	<input type="text" value="2.0"/>	t4 [s]:	<input type="text" value="0.4"/>	t7 [s]:	<input type="text" value="0.1"/>	t10 [s]:	<input type="text" value="0.0"/>

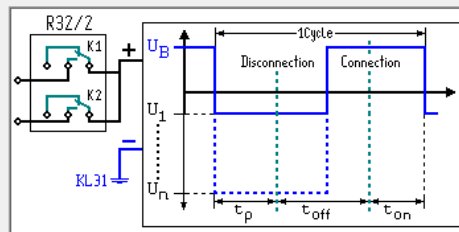
E-42:
Spannungsimpulse aufgrund Verbraucherabschaltung

 UB [V]:

 U1 [V]:

 tp [ms]:

 t_off [s]:

 t_on [s]:


Relay

☒ R32 K1

☐ R32 K2

 Cycles:

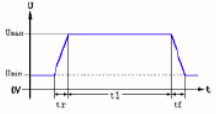
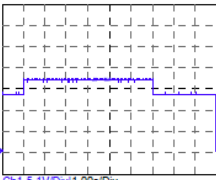
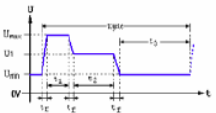
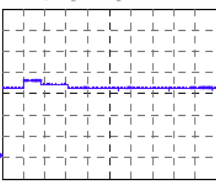
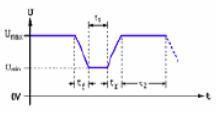
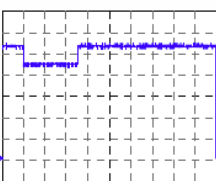
Beispiel Prüfausdruck:

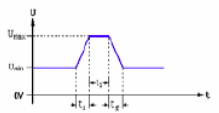
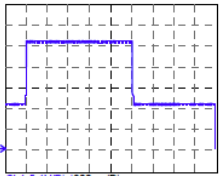
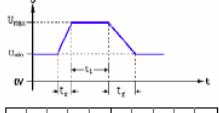
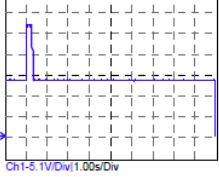
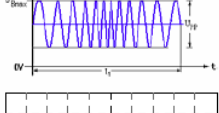
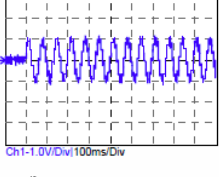
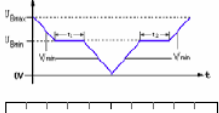
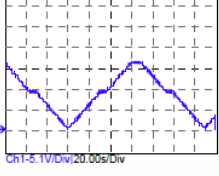

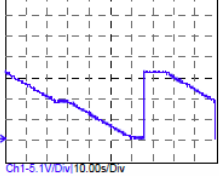
Spitzenberger & Spies
Viechtach

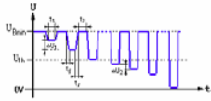
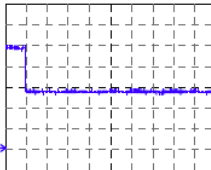
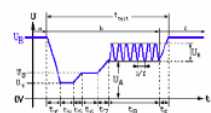
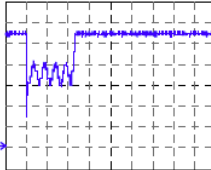
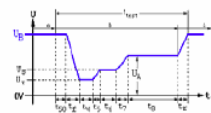
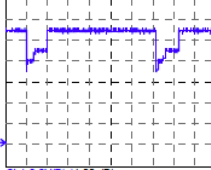
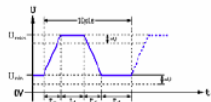
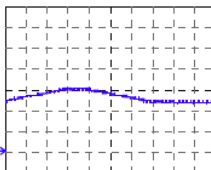
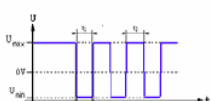
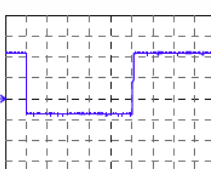
Name: Herr Mustermann
Department: Fertigung
Company: SPS
Test report no: 1
Device: PAS 2500/GN/Kfz
Specimen: VW 80000
Manufacturer: SPS
Type:

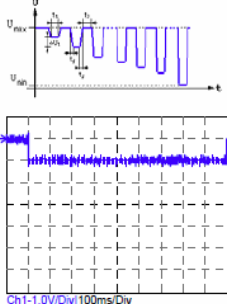
Serial no: A5211
Operating modes: normal
Comment1: --
Comment2: --
Comment3: --
Comment4: --
Date: 29.04.2014
Test date: 28.04.2014

Nominal voltage: 12.00 Volt
Shunt resistor Rs: no shunt
Executed test: VW 80000
Test description: --

Pulse	U_Puls	Ri	Test parameters	Pulses Time	Delay	Figure
Tools - E-01 Langzeit Überspannungen	-	0.0 Ohm	tr = 9.9ms, tf = 9.9ms, t1 = 6.0s, Umax = 17.000V, Umin = 13.500V	2 P.	10.0 s	 
Tools - E-02 Transiente Überspannung	-	0.0 Ohm	tr = 1.0ms, tf = 1.0ms, t1 = 400.0ms, t2 = 600.0ms, t3 = 1.0s, Umin = 16.000V, U1 = 17.000V, Umax = 18.000V, Cycles = 1	2 P.	10.0 s	 
Tools - E-03 Transiente Unterspannung	-	0.0 Ohm	tr = 1.8ms, tf = 1.8ms, t1 = 500.0ms, t2 = 1.0s, Umin = 9.000V, Umax = 10.800V, Cycles = 1	2 P.	10.0 s	 

Pulse	U_Puls	Ri	Test parameters	Pulses Time	Delay	Figure
Tools - E-04 Jumpstart	-	0.0 Ohm	tr = 9.9ms, tf = 9.9ms, t1 = 1.0s, Umax = 26.000V, Umin = 10.800V	2 P.	10.0 s	 
Tools - E-05 Load Dump	-	0.0 Ohm	tr = 2.0ms, tf = 30.0ms, t1 = 300.0ms, Umax = 27.000V, Umin = 13.500V, Cycles = 1, Breaktime = 6.000min	2 P.	10.0 s	 
Tools - E-06 Überlagerte Wechselspannung	-	0.10 Ohm	Ua = 15.0V, t1 = 60.0s, Umax = 16.000V, Upp = 2.000V, Fmin = 15.000Hz, Fmax = 30000.000Hz, Cycles = 1, UB = 15.000V	2 P.	10.0 s	 
Tools - E-07 Langsames Absenken - Anheben	-	0.0 Ohm	t1 = 6.0s, t2 = 6.0s, UBmax = 16.000V, U1 = 9.000V, U2 = 9.000V, Delta U = 18.000V/min	2 P.	10.0 s	 
Tools - E-08 Langsam Absenken - schell Erhöhen	-	0.0 Ohm	tr = 100.0ms, t1 = 6.0s, t2 = 6.0s, UBmax = 16.000V, U1 = 9.000V, Delta U = 18.000V/min	2 P.	10.0 s	 

Pulse	U_Puls	Ri	Test parameters	Pulses Time	Delay	Figure
Tools - E-09 Resetverhalten	-	0.0 Ohm	tr = 10.0ms, tf = 10.0ms, t2 = 100.0ms, Umax = 9.800V, Umin = 2.000V, Uth = 6.000V, Delta U1 = 1.000V, Delta U2 = 0.500V, t1 case 1 = 5.0s	2 P.	10.0 s	 
Tools - E-11 Startimpuls - Kaltstart	-	0.0 Ohm	Ua = 6.0V, tr = 100.0ms, tf = 1.0ms, t4 = 20.0ms, t5 = 10.0ms, t6 = 20.0ms, t7 = 10.0ms, t8 = 1.0s, UB = 11.000V, UT = 3.000V, US = 5.000V, UR = 2.000V, Frequenz = 4.000Hz, Cycles = 1, Break = 1.0s	2 P.	10.0 s	 
Tools - E-11 Startimpuls - Warmstart	-	0.0 Ohm	Ua = 9.0V, tr = 1.0ms, tf = 10.0ms, t4 = 15.0ms, t5 = 70.0ms, t6 = 240.0ms, t7 = 70.0ms, t8 = 600.0ms, UB = 11.000V, UT = 7.000V, US = 8.000V, t50 = 0.01ms, Cycles = 3, Break = 5.0s	2 P.	10.0 s	 
Tools - E-12 Spannungsverlauf Bordnetzregelung	-	0.0 Ohm	tr = 300.0ms, tf = 300.0ms, t1 = 100.0ms, Umax = 15.000V, Umin = 11.800V, Cycles = 1	2 P.	10.0 s	 
Tools - E-15 Verpolung - dynamisch	-	0.10 Ohm	tr = 10.0ms, tf = 10.0ms, t1 = 1.0s, t2 = 6.0s, Umax = 10.800V, Umin = -4.000V, Cycles = 3	2 P.	10.0 s	 

Pulse	U_Puls	Ri	Test parameters	Pulses Time	Delay	Figure
Tools - E-15 Verpolung - statisch	-	0.10 Ohm	tr = 10.0ms, tf = 10.0ms, t1 = 1.0s, t2 = 1.0s, Umin = -14.000V, Delta U = -1.000V	2 P.	10.0 s	

Comment: