

SuperTVS – 15000W Transient Voltage Suppressor

1. Features

- Glass passivated junction
- Low incremental surge resistance
- Excellent clamping capability
- 15000W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Fast response time
- High Temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs (2.3kg) tension
- Plastic package has underwriter laboratory flammability 94V-0
- Meets MSL level 1, per J-STD-020
- ISO 16750-2 Test A
 - 24v System (174V 2 Ω 350ms 10c)

2. Mechanical Data

- Case: Moulded plastic over glass passivated junction
- Terminal: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode except bi-directional models
- Mounting Position: Any
- Weight: 2.30g

3. Applications

- Auto power system
- Can-bus
- ABS powers
- Car audio and video
- Automotive instrument
- Bluetooth
- Car GPS

4. Maximum Ratings and Characteristics

Ratings at 25° ambient temperature unless otherwise specified

Rating	Symbol	Value	Units
Peak pulse power dissipation at 10/1000us waveform (Note1, Fig.1)	P _{PPM}	15000	W
Peak pulse current of at 10/1000us waveform (Note1, Fig.3)	I _{PPM}	See Table	A
Steady state power dissipation at T _L =75°C	P _{M(AV)}	8.0	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note2)	I _{FSM}	400	A
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to 175	°C
Typical thermal resistance junction to lead	R _{θJL}	8	°C/W
Typical thermal resistance junction to ambient	R _{θJA}	40	°C/W

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig.2.

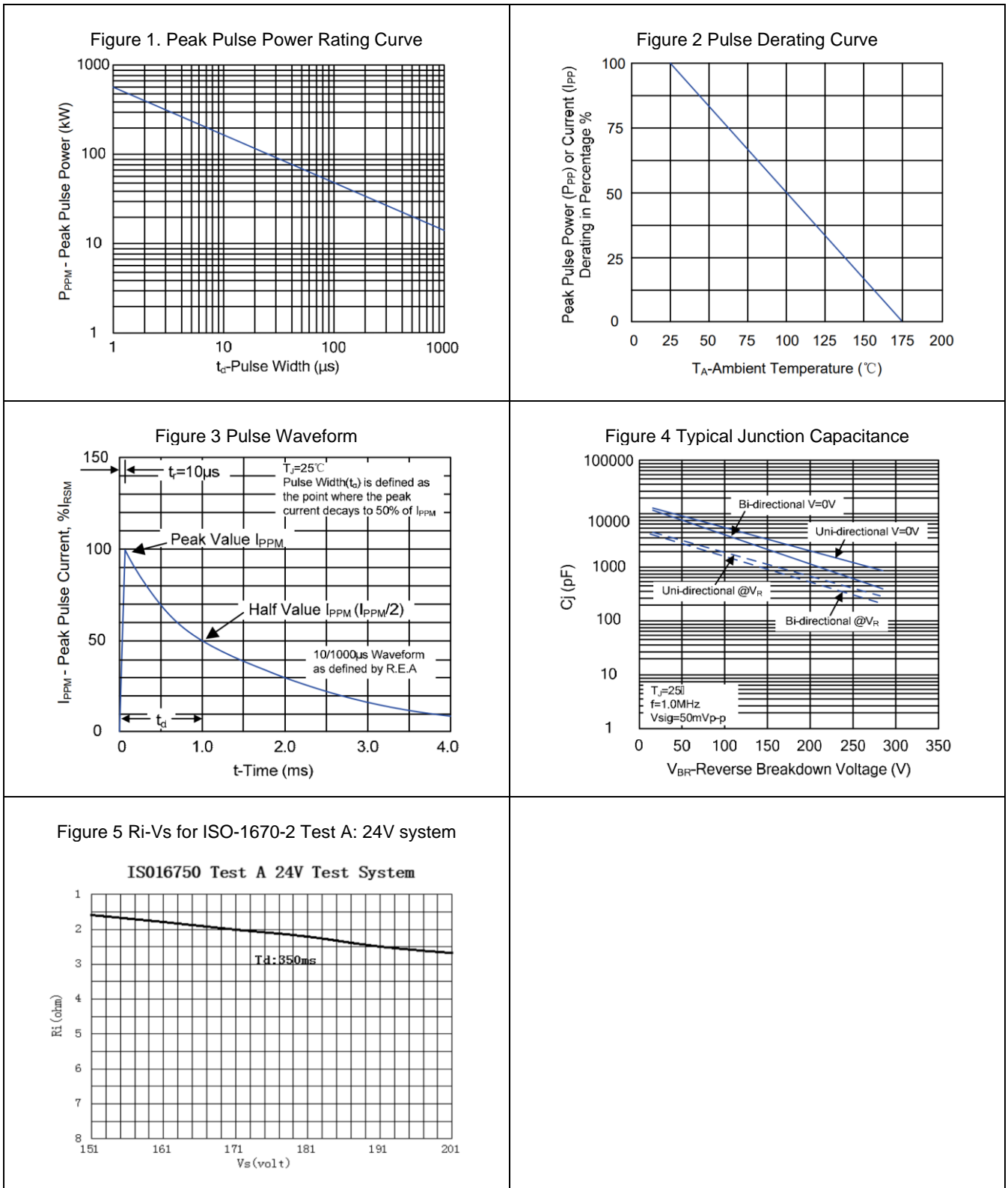
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

5. Electrical Characteristics (TA=25°C)

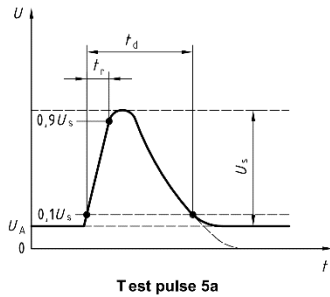
Part Number (Uni)	Part Number (Bi)	Reverse Stand-off Voltage V _R (Volts)	Breakdown Voltage V _{BR} (Volts) @ I _T		Test Current I _T (mA)	Maximum Peak Pulse Current I _{PP} (A)	Maximum Clamping Voltage V _C @ I _{PP} (Volts)	Maximum Reverse Leakage IR @ V _R (μA)	ROHS2.0
			MIN	MAX					
ATH24A	ATH24CA	24	26.81	29.35	5	371.0	40.7	2	y
ATH26A	ATH26CA	26	29.04	31.80	5	343.2	44.0	2	y
ATH28A	ATH28CA	28	31.28	34.24	5	317.9	47.5	2	y
ATH30A	ATH30CA	30	33.51	36.7	5	297.8	50.7	2	y
ATH33A	ATH33CA	33	36.9	40.4	5	276.1	54.7	2	y
ATH36A	ATH36CA	36	40.2	44.0	5	252.5	59.8	2	y
ATH43A	ATH43CA	43	48.0	52.6	5	216.3	69.8	2	y
ATH45A	ATH45CA	45	50.3	55.0	5	207.4	72.8	2	y
ATH48A	ATH48CA	48	53.6	58.7	5	194.3	77.7	2	y

For bidirectional type having VR of 30 volts and less, the IR limit is double.

6. Ratings and Characteristic Curves (TA =25°C unless otherwise noted)



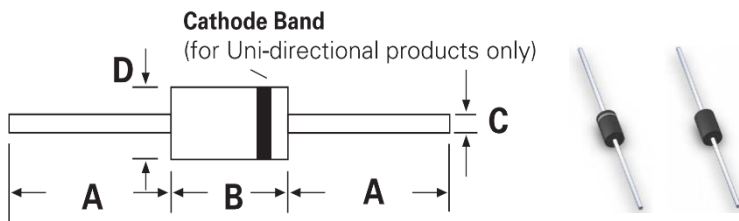
7. Tests ISO 16750-2 Test A



Parameter	12V system	24V system
Us	79V to 101V	151V to 202V
Ri	0.5Ω to 4Ω	1Ω to 8Ω
td	40ms to 400ms	100ms to 350ms
tr	$(10^{0.5})$ ms	

Parameters for test pulse 5

8. Dimension (P600)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	1.000	-	25.40	-
B	0.34	0.36	8.60	9.10
C	0.048	0.052	1.22	1.32
D	0.340	0.36	8.60	9.10

9. Packaging

Symbol	Dimension (mm)
<p>Tape</p>	
A	10.0±0.5
B	53.0±1.0
Z	1.2Max.
T	6.0±0.4
E	0.8Max.
L1-L2	1.0Max.
<p>Box</p>	
L	250.0±5.0
W	75.0±5.0
H	114.0±5.0
Quantity: 300PCS	
<p>Reel</p>	
D	330.0±3.0
D0	16.4±2.0
D1	86.0±2.0
W1	76.0±3.0
Quantity: 800PCS	

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