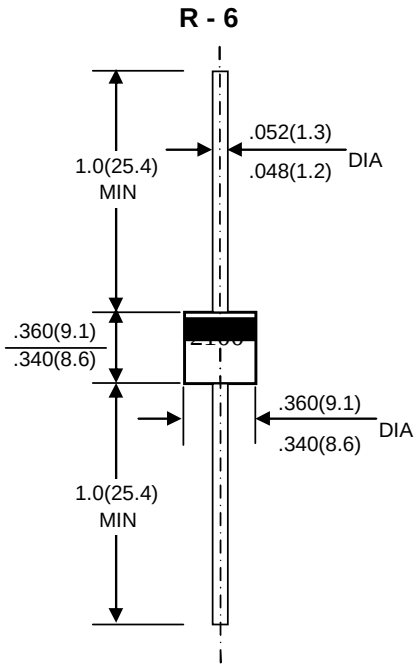
PK T(18KW) Series

Features

Glass passivated junction
Plastic package P-600
Bi-directional or Un-directional
Very Low Clamping Voltage
High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension
Continued current transient suppressor
RoHScompliant
18KW peak pulse power capability on 10/1000us waveform
Operating Junction and Storage Temperature Range is -55℃ to 175℃
AEC-Q101



Dimensions in inches and(millimeters)

IEC Compatibility

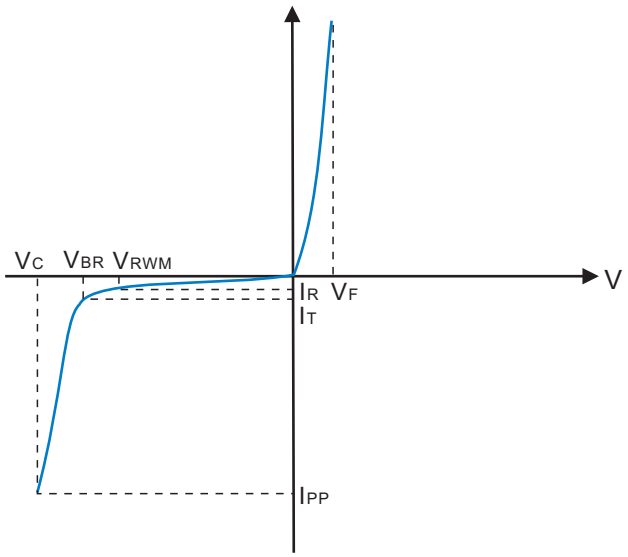
ISO 16750-2 Test A 24V System (174V 2Ω 350ms 10c)

Applications

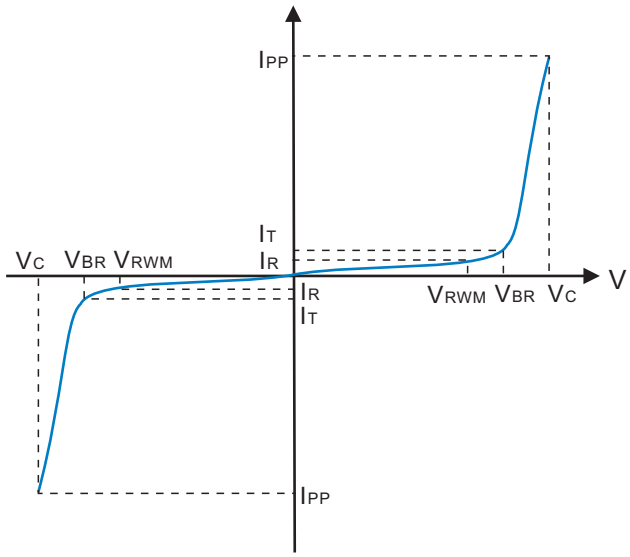
Auto powers system
Can-bus
ABS powers
Car audio and video
Automotive instrument
Bluetooth
Car GPS

I-V Curve Characteristics

Uni-directional

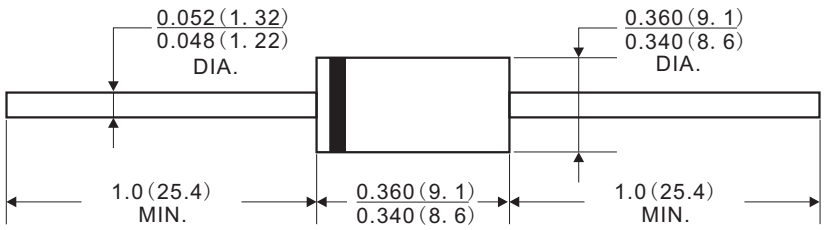


Bi-directional



Dimensions (P600)

Case Style P600



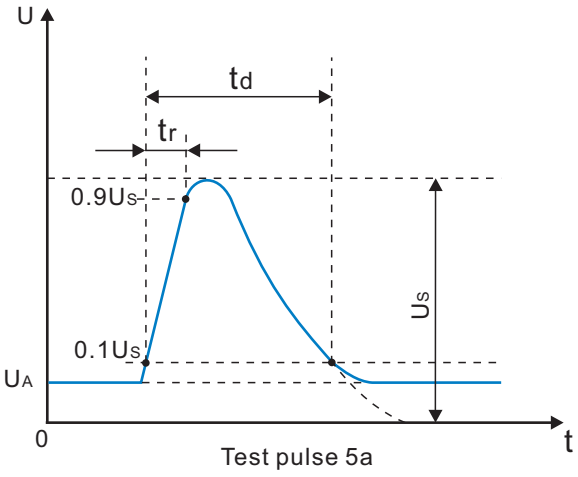
Dimensions in inches and(millimeters)

Electrical Characteristics

"*"Stand for commonly used models

PKT Part Number		Stand-Off Voltage	Reverse Leakage @V_{RWM}	Breakdown Voltage @I_T		Test Current	Max. Clamping Voltage @Ipp 10/1000μs	
UNI-Polar	BI-Polar	V_{RWM}(V)	I_R(μA)	V_{BR}(V)Min.	V_{BR}(V)Max.	I_T(mA)	Vc(V)	Ipp(A)
PKT30A	PKT30CA	30	10	33.3	36.8	5	48.4	371.9
PKT33A	PKT33CA	33	2	36.7	40.6	5	53.3	337.7
PKT36A	* PKT36CA	36	2	40.0	44.2	5	58.1	309.8

Test ISO 16750-2 Test A



Test pulse 5a

Parameter	12V System	24V System
U_S	79V to 101V	151V to 202V
R_i	0.5Ω to 4Ω	1Ω to 8Ω
t_d	40ms to 400ms	100ms to 350ms
t_r	$(10\ ^{0}_{-5})$ms	

Ratings and Characteristic Curves (TA=25 ℃ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Cure

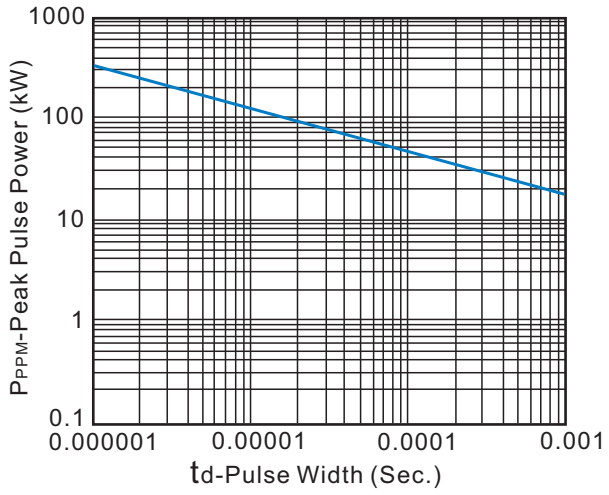


Fig.2 Typical Junction Capacitance

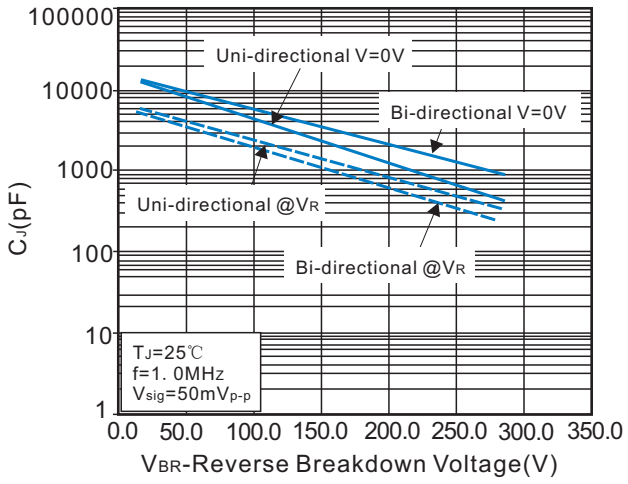


Fig.3 Pulse Waveform

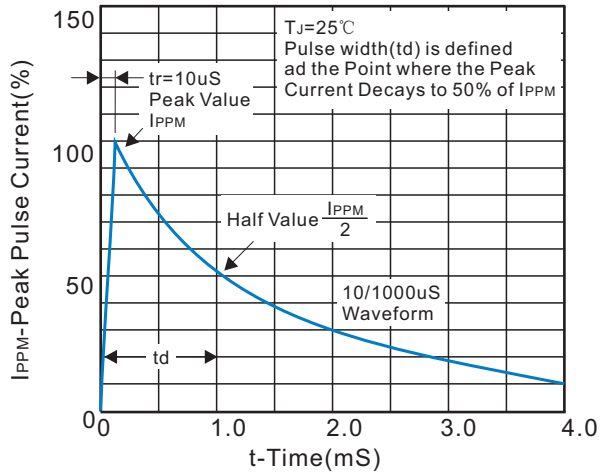


Fig.4 Maximum Non-repetitive Forward Surge

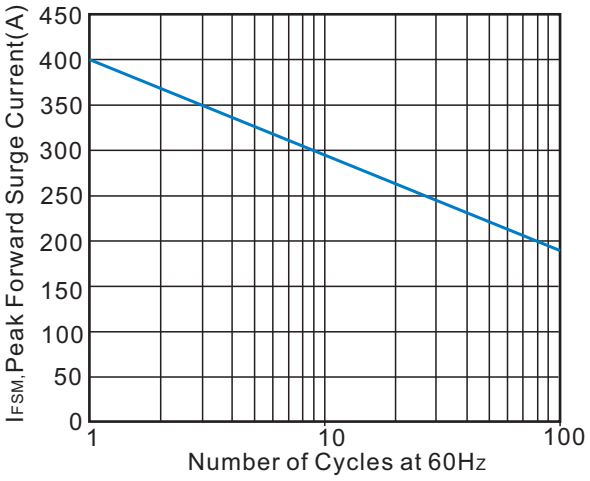


Fig.5 Ri-Vs chart for ISO-16750-2 Test A : 24V System

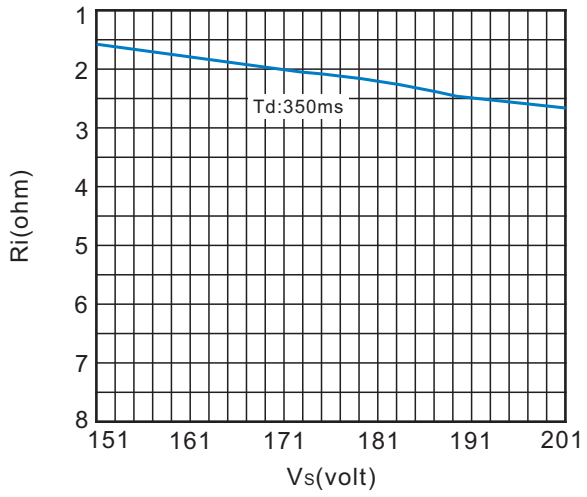
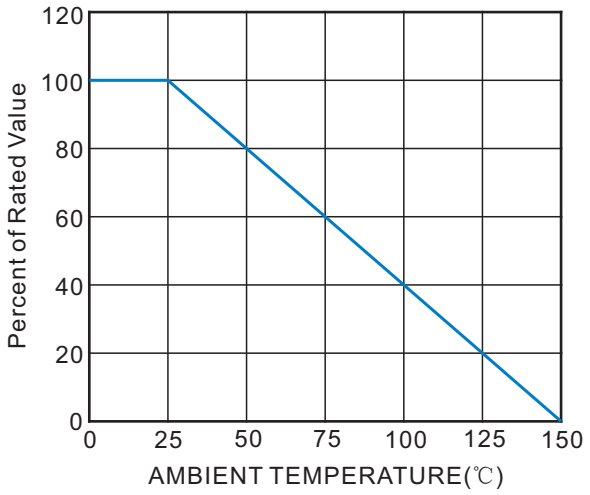


Fig.6 Power Derating Cure



Recommended Soldering Conditions

Recommended Conditions

Re"ow Condition		Pb-Free assembly (see Fig.1)
Pre Heat	-Temperature Min($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time(Min to Max)(t_s)	60-180secs
Average ramp up rate (Liquidus Temp(T_L) to peak)		3℃/sec.Max.
$T_{s(max)}$ to T_L -Ramp-up Rate		3℃/sec.Max.
Re"ow	-Temperature(T_L)(Liquidus)	+217℃
	-Temperature(t_L)	60-150secs
Peak Temp(T_P)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp(t_P)		30 secs.Max.
Ramp-down Rate		6℃/sec.Max.
Time 25℃ to Peak Temp(T_P)		8 min.Max.
Do not exceed		+260℃

Reflow Soldering