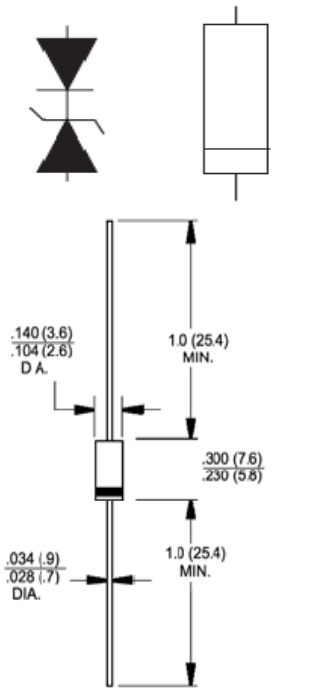
PCR160

Peak Clamp Rectifiers

Features

- Metal-Semiconductor junction with guard ring
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Protection of the Mosfet in flyback power supply
- TRANSIL™ and blocking diode in a single package



Dimensions in inches and (millimeters)

DO-15

Mechanical Data

- Case: Molded plastic body
- Terminals: Plated Axial leads,solderable per MIL-STD-750,Method 202
- Mounting position:Any

ABSOLUTE MAXIMUM RATINGS			
PARAMETER	**SYMBOL**	**Value**	**UNIT**
Storage temperature	Tstg	-55~+150	°C
Junciton temperature	Tj	150	°C
Maximum power dissipation Tlead=90℃	P	1.5	W

ELECTRICAL CHARACTERISTICS TRANSIL(Tj= 25 °C unless otherwise noted)							
PARAMETER		**SYMBOL**	Test conditions	**Value**			**UNIT**
				Min.	**Typ.**	**Max.**	
Maximum peak pulse current at TP=10/1000uS		P_{PK}	I_{PP}=2.7A	——	——	219	V
Leakage current	Tj=25℃	IR	VR=136V	——	——	1	uA
	Tj=125			——	——	10	
Breakdown voltage		VBR	IR=1mA	150	160	170	V
Temperature coefficient		αT	——	——	——	10.8	10^{-4}/℃

ELECTRICAL CHARACTERISTICS DIODE(Tj= 25 °C unless otherwise noted)							
PARAMETER		**SYMBOL**	Test conditions	**Value**			**UNIT**
				Min.	**Typ.**	**Max.**	
Reverse leakage current	Tj=25℃	IR	VR=VRRM	——	——	3	uA
	Tj=125			——	3	20	
Repetitive peak reverse voltage		VRRM	Tj=25℃	700	——	——	V
Reverse recovery time		TRR	IF=0.5A,IR=1.0A,IRR=0.25A	——	——	50	nS
Peak forward voltage	Tj=25℃	VFP	IF=1A DI_F/dt=100A/uS	——	——	12	V
	Tj=125			——	——	18	

CAPACITANCE			
PARAMETER	**SYMBOL**	**Typical value**	**UNIT**
Total parasitic capacitance 1MHZ 4.0V	Cj	35	pF
THERMAL RESISTANCES			
PARAMETER	**SYMBOL**	**Typical value**	**UNIT**
Junciton to leads L=10mm	$R_{\Theta jl}$	40	℃/W
Junciton to ambient condition see note 1	$R_{\theta Ja}$	105	℃/W

Notes：1. Thermal Resistance From Junction to Ambient and From Junction to Lead Mounted on P.C.B with 0.2"×0.2"(5.0×5.0mm) Copper Pad Areas

RATINGS AND CHARACTERISTICS CURVES

Fig. 1: Peak pulse power versus exponential pulse duration.

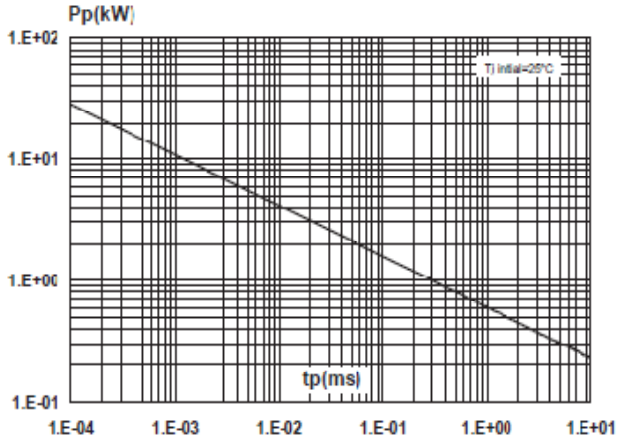


Fig. 2: Relative variation of peak pulse power versus initial junction temperature.

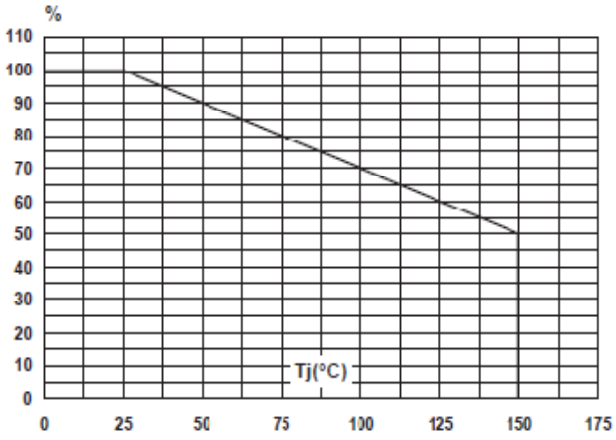


Fig. 3: Average power dissipation versus ambient temperature.

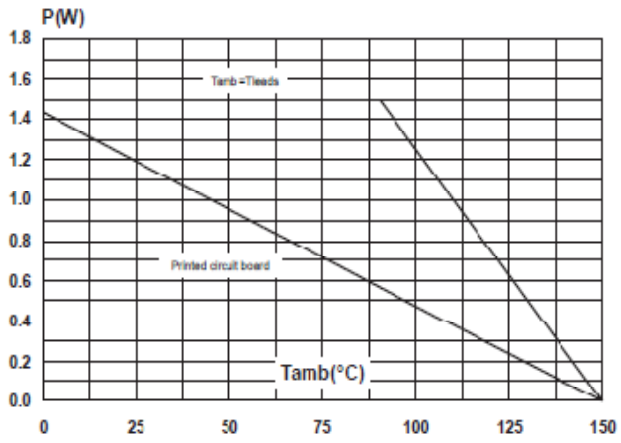


Fig. 4: Variation of thermal impedance junction to ambient versus pulse duration (printed circuit board epoxy FR4)