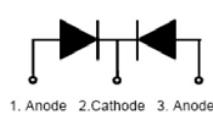


Features

- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



Mechanical Data

Schematic Diagram

TO-220-AB

- Case: Epoxy, Molded
- Weight: 1.9grams approximately
- Finish: All external surfaces corrosion resistant and terminal leads are readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10 sec

Maximum Ratings & Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	-	V_{RRM}	60	V
Working Peak Reverse Voltage	-	V_{RWM}	60	V
Maximum DC Blocking Voltage	-	V_{DC}	60	V
Maximum Average Forward Rectified Current at $T_c=105^\circ\text{C}$	Total Device	$I_{F(AV)}$	40	A
	Per Diode		20	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load Per Diode	-	I_{FSM}	200	A
Peak Repetitive Reverse Current per Leg at $t_p=2.0\mu\text{s}$, 1KHz	-	I_{RRM}	2.0	A
Voltage Rate of Change (Rated V_R)	-	dv/dt	10000	V/us
Operating Junction Temperature Range	-	T_J	-55 to +150	°C
Storage Temperature Range	-	T_{STG}	-55 to +150	°C
Maximum Instantaneous Forward Voltage per Leg	$I_F=20\text{A} , T_c=25^\circ\text{C}$	V_F	0.59 (0.54TYP)	V
	$I_F=20\text{A} , T_c=125^\circ\text{C}$		0.51	
Maximum Reverse Current per Leg at Working Peak Reverse Voltage	$T_J=25^\circ\text{C}$	I_R	200	uA
	$T_J=100^\circ\text{C}$		15	mA

Thermal Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Typical Value	Unit
Thermal Resistance, Junction to Case per Leg	$R_{\theta JC}$	2.0	°C /W
Thermal Resistance, Junction to Ambient per Leg	$R_{\theta JA}$	62.5	°C /W

Note: Pulse test:300us pulse width, duty cycle=2%

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

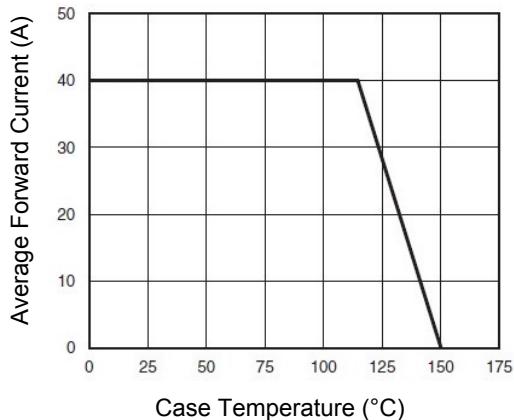


Figure 1. Forward Current Derating Curve

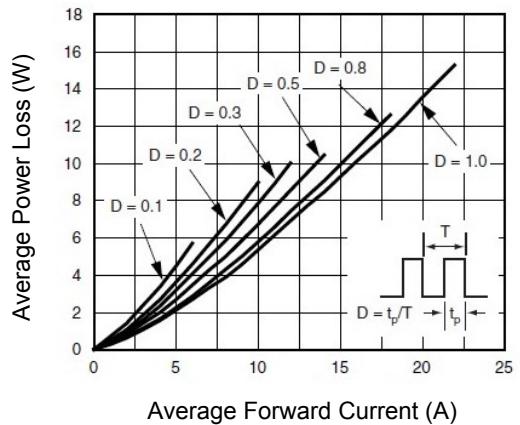


Figure 2. Forward Power Loss Characteristics Per Diode

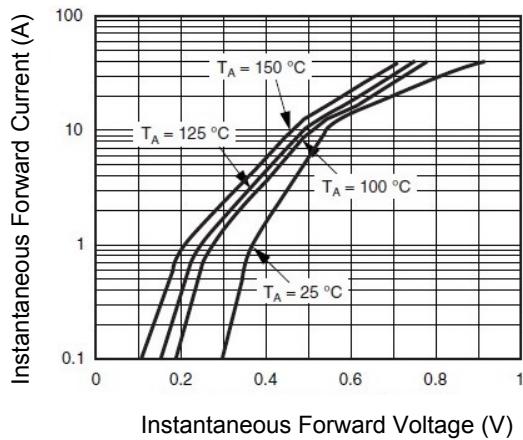


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

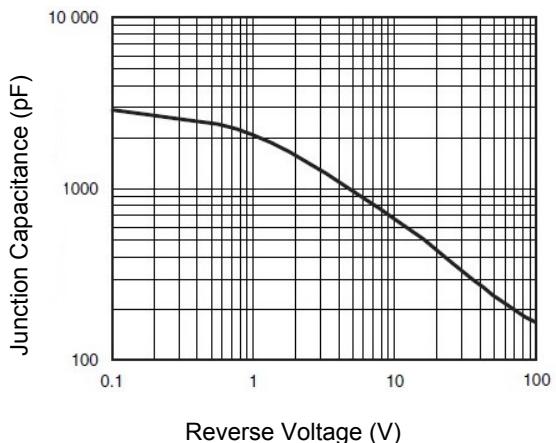


Figure 4. Typical Junction Capacitance Per Diode

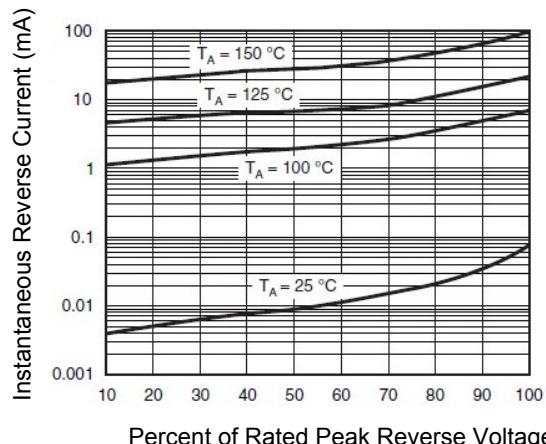


Figure 5. Typical Reverse Characteristics Per Diode

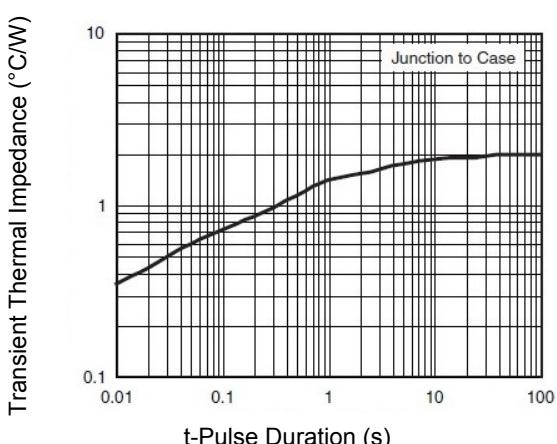


Figure 6. Typical Transient Thermal Impedance Per Diode

Package Outline Dimensions

TO-220-AB

Unit: mm

