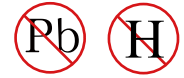




YEA SHIN TECHNOLOGY CO., LTD
HIGH VOLTAGE SURFACE MOUNT
SWITCHING DIODE

MMBD3004S

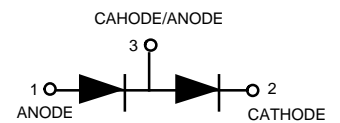


FEATURE

- Fast Switching Speed
- High Conductance
- High Reverse Breakdown Voltage Rating
- We declare that the material of product compliance with RoHS requirements.



SOT -23



Marking : KAE

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage	V_{RWM}	300	V
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_R(\text{RMS})$	212	V
Forward Continuous Current(Note 2)	I_F	225	mA
Peak Repetitive Forward Current(Note 2)	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{s}$	I_{FSM}	4.0	A
		1.0	
Power Dissipation(Note 2)	P_d	350	mW
Thermal Resistance Junction to Ambient Air(Note 2)	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified, per element

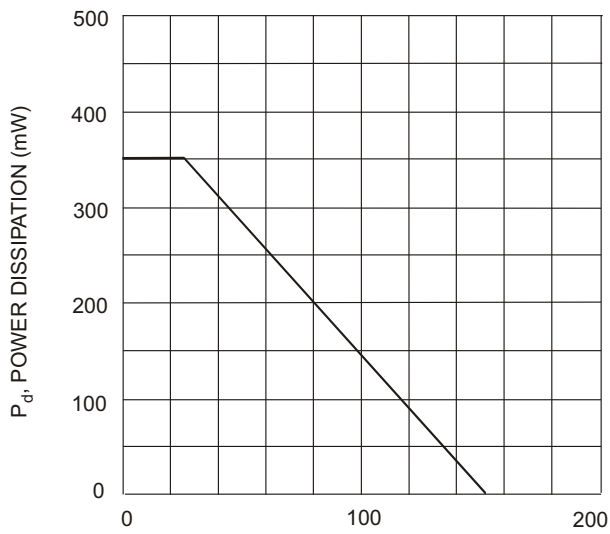
Characteristic	Symbol	Min	Typ	MAX	Unit	Test Condition
Reverse Breakdown Voltage(Note 1)	$V_{(BR)R}$	350			V	$I_R=100\mu\text{A}$
Forward Voltage(Note 1)	V_F		0.78	0.87	V	$I_F=20\text{mA}$
			0.93	1.0		$I_F=100\text{mA}$
			1.03	1.25		$I_F=200\text{mA}$
Reverse Current(Note 1)	I_R		30	100	nA	$V_R=240\text{V}$
			35	100	μA	$V_R=240\text{V}, T_j=150^{\circ}\text{C}$
Total Capacitance	C_T		1.0	5.0	Pf	$V_R=0\text{V}, f=1.0\text{MHZ}$
Reverse Recovery Time	T_{rr}			50	ns	$I_F=I_R=30\text{mA}$ $I_{rr}=3.0\text{mA}, R_L=100\Omega$

Notes: 1. Short duration test pulse used to minimize self-heating effect.

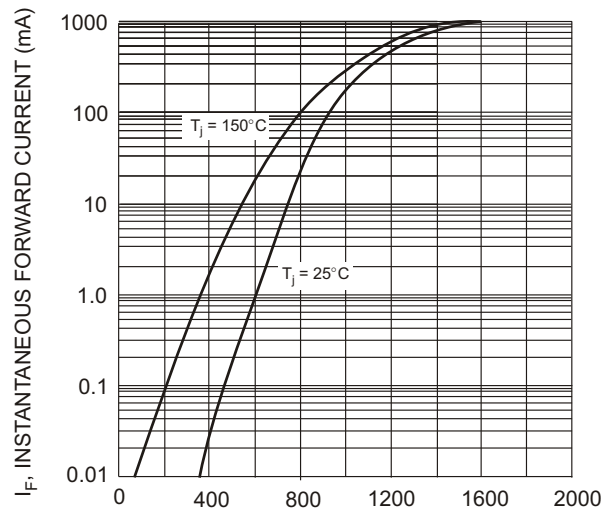
2. Part mounted on FR-4 board with recommended pad layout.

DEVICE CHARACTERISTICS

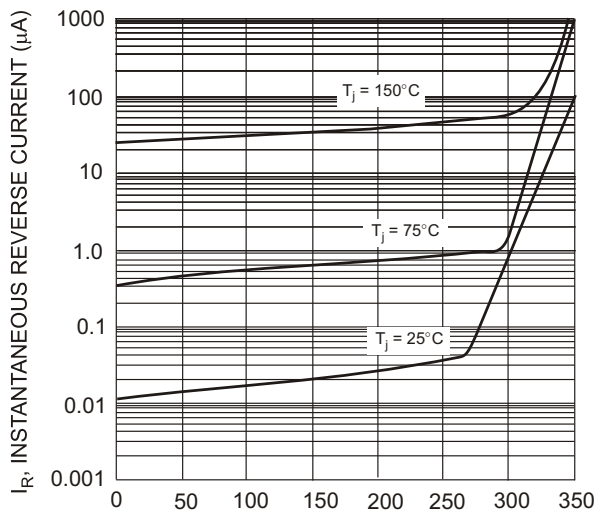
MMBD3004S



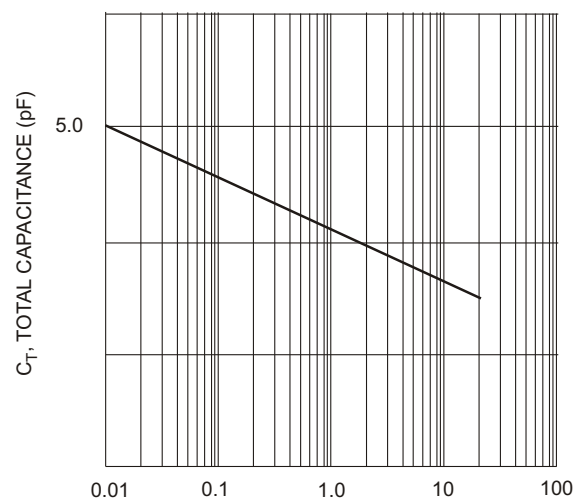
T_A , AMBIENT TEMPERATURE, (°C)
Fig. 1 Power Derating Curve, total package



V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics, per element



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics, per element



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

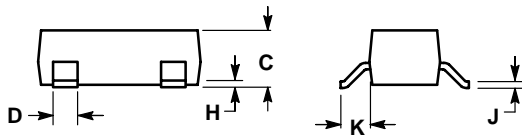
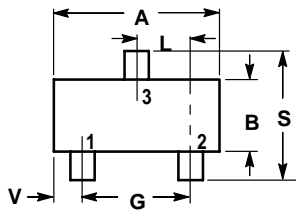
PACKAGE OUTLINE & DIMENSIONS

MMBD3004S

SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

- PIN 1. BASE
2. EMITTER
3. COLLECTOR

