

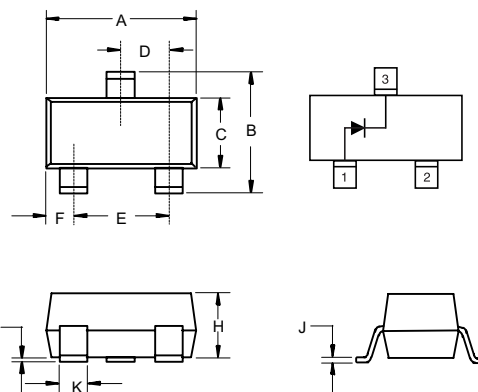
MMBD6050

Features

- Silicon Epitaxial Planar Diode
- Fast Switching Diode in Case SOT-23
- Suited for Automatic Insertion
- Marking Code:5A
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Small-Signal Switching Diode

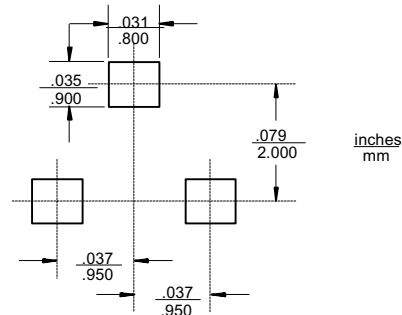
SOT-23



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



Maximum Ratings@ T_c=25°C Unless Otherwise Specified

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

Ratings	Symbol	Value	Unit
Continuous Reverse Voltage	V _R	70	V
Forward Current	I _F	200	mA
Peak Forward Surge Current	I _{FSM}	500	mA
Max.Power Dissipation on FR-5 Board ⁽¹⁾ T _A =25°C Derate Above 25°C	P _{tot}	225 1.8	mW mW/°C
Max.Power Dissipation on Alumina Substrate ⁽²⁾ T _A =25°C Derate Above 25°C	P _{tot}	300 2.4	mW mW/°C
Thermal Resistance Junction to Ambient FR-5 Alumina	R _{θJA}	556 417	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

Rating	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage I _R =100μA	V _{(BR)R}	70	---	V
Forward Voltage Drop I _F =1mA I _F =100mA	V _F	0.55 0.85	0.7 1.1	V
Reverse Leakage Current V _R =50V	I _R	---	0.1	μA
Reverse Recovery Time I _{rr} =1mA, I _F =I _R =10mA	t _{rr}	---	4	ns
Capacitance V _R =0	C _{tot}	---	2.5	pF

Notes: (1) FR-5=1.0×0.75×0.062 in.

(2) Alumina=0.4×0.3×0.024 in. 99.5% alumina

MMBD6050

TM

FIG 1

Forward Characteristics

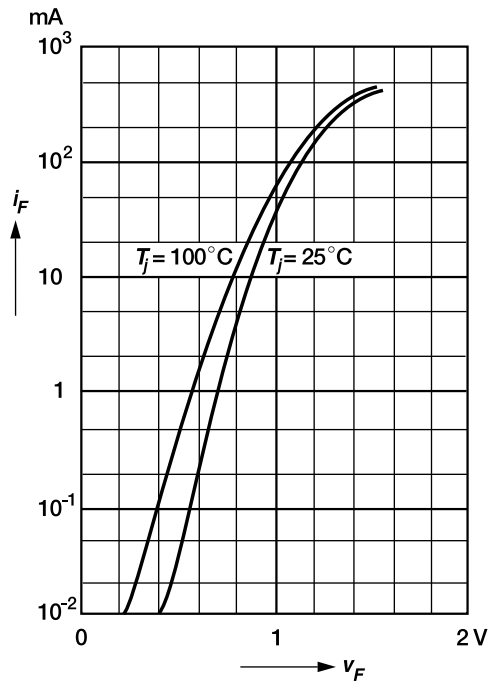


FIG 2

Dynamic Forward Resistance
Versus Forward Current

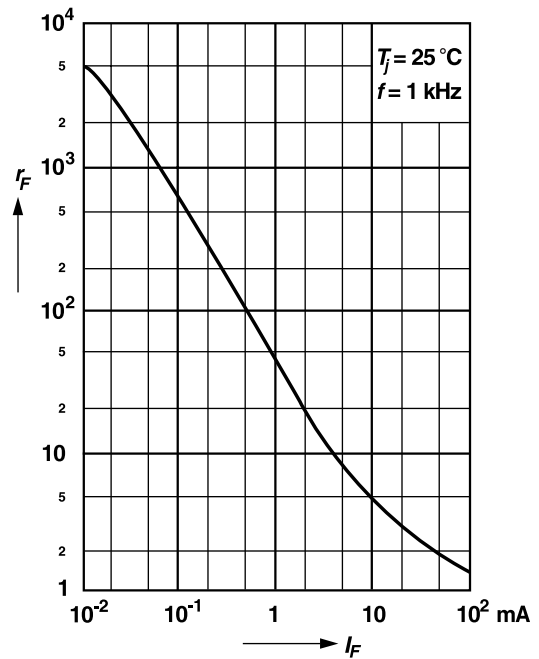


FIG 3

Admissible Power Dissipation Versus
Ambient Temperature

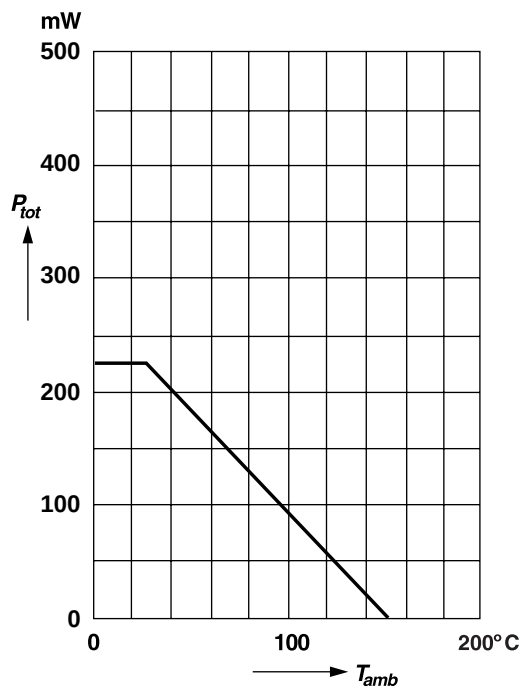


FIG 4

Relative Capacitance Versus
Reverse Voltage

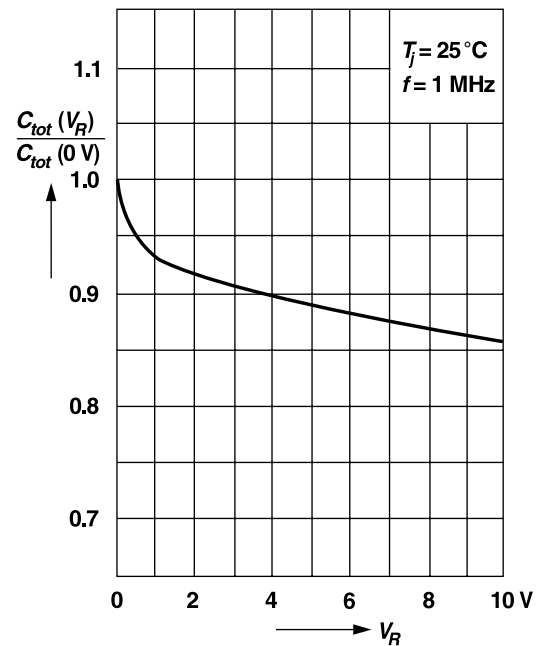


FIG 5
Leakage Current Versus Junction Temperature

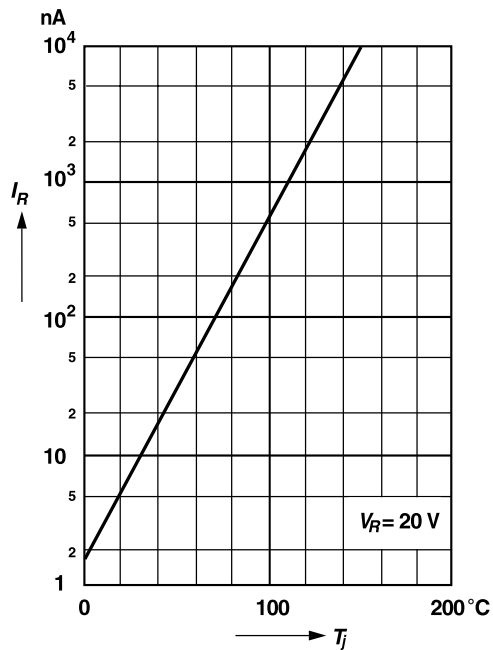
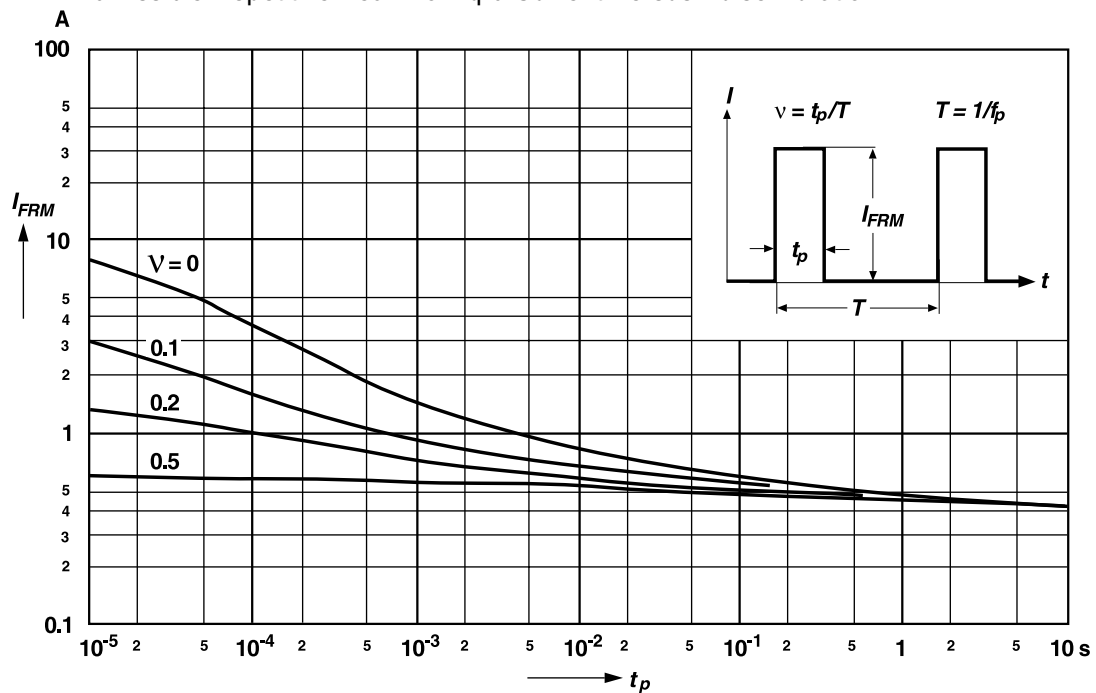


FIG 6
Admissible Repetitive Peak Forward Current Versus Pulse Duration



Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel