

Microwave Tunnel Diodes

FEATURES

- Planar Construction
- Zero Bias Detector Operation
- Low Impedance
- Stable Vout vs. Temperature

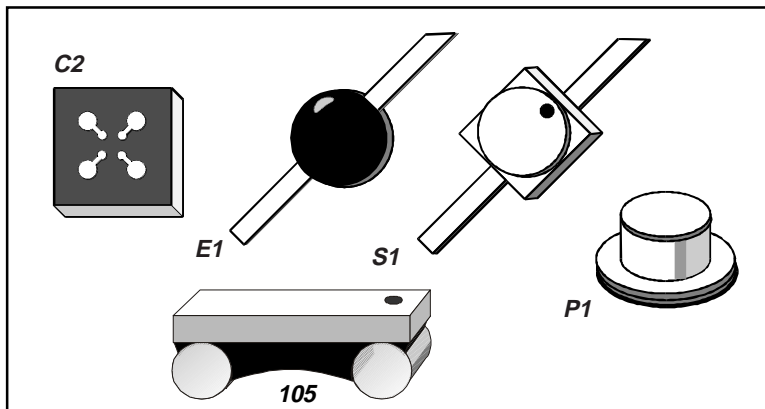
ENVIRONMENTAL RATINGS

(MAXIMUM)

Operating Temperature -65°C to +125°C

Storage Temperature -65°C to +150°C

Storage Temperature S1 Case -65°C to +125°C

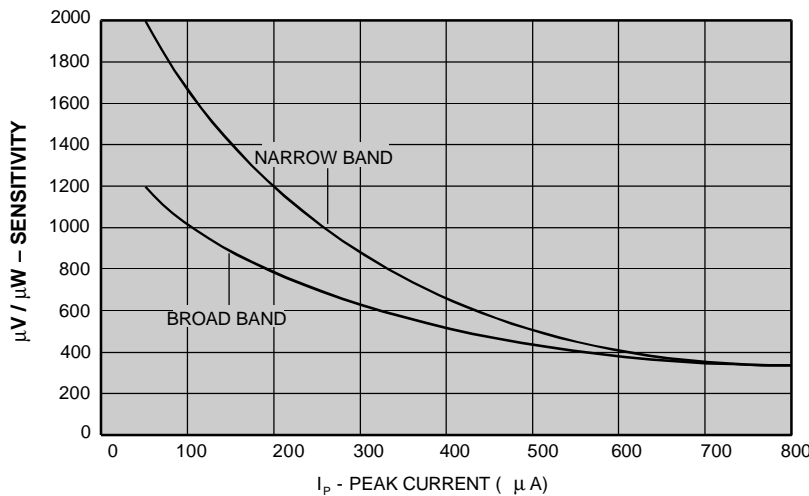
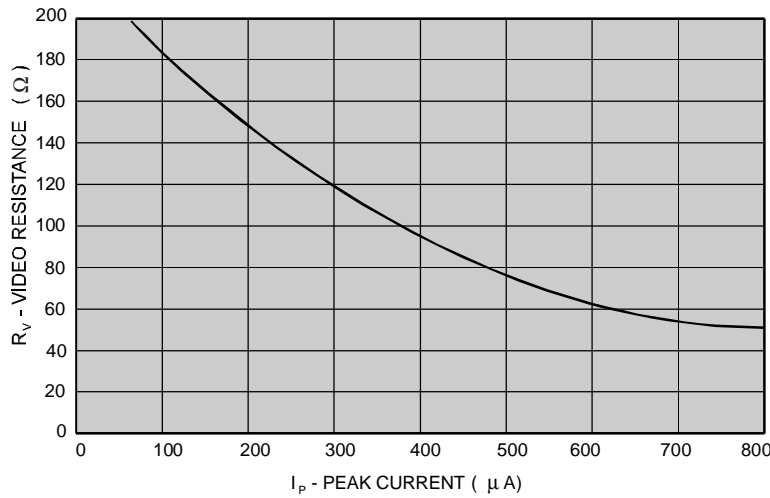


Electrical Specifications @ +25° C

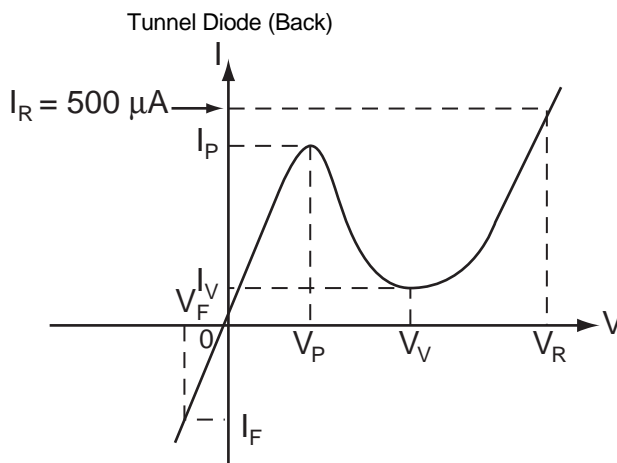
PART NUMBER	CASE STYLE	I_P Range- μA	I_V Max- μA	V_R Typical mV	V_F Max mV	C_T Max-pF
MP1101	C2	0-100	40	425	150	0.20
MP1100	C2	0-100	40	425	145	0.25
MP1102	C2	0-100	40	425	145	0.30
MP1103	E1	0-100	40	425	145	0.40
MP1104	S1	0-100	40	425	145	0.50
MP1105	P1	0-100	40	425	145	0.70
MP1201	C2	100-200	80	425	135	0.20
MP1200	C2	100-200	80	425	130	0.25
MP1202	C2	100-200	80	425	125	0.30
MP1203	E1	100-200	80	425	130	0.40
MP1204	S1	100-200	80	425	130	0.50
MP1205	P1	100-200	80	425	130	0.70
MP1301	C2	200-300	100	425	125	0.20
MP1300	C2	200-300	100	425	125	0.25
MP1302	C2	200-300	100	425	120	0.30
MP1303	E1	200-300	100	425	120	0.40
MP1304	S1	200-300	100	425	120	0.50
MP1305	P1	200-300	100	425	120	0.70
MP1451	C2	300-450	150	425	120	0.20
MP1450	C2	300-450	150	425	120	0.25
MP1452	C2	300-450	150	425	120	0.30
MP1453	E1	300-450	150	425	115	0.40
MP1454	S1	300-450	150	425	115	0.50
MP1455	P1	300-450	150	425	115	0.70
MP1601	C2	450-600	225	425	115	0.20
MP1600	C2	450-600	225	420	110	0.25
MP1602	C2	450-600	225	420	105	0.30
MP1603	E1	450-600	225	420	110	0.40
MP1604	S1	450-600	225	420	110	0.50
MP1605	P1	450-600	225	420	110	0.70
Test Conditions				$I_R = 500 \mu A$	$I_F = 3 mA$	V_V

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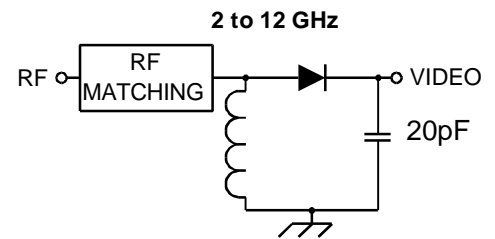
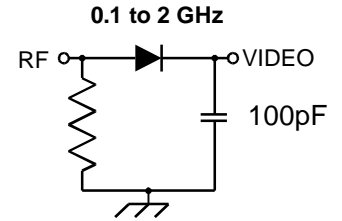
DIODES



Characteristic Curve



Typical Detector Circuits



Chip (C2) Assembly Notes

ThermoCompression Wedge Bonding:

1. Use 0.7 mil gold wire.
2. Tip temperature = 180°C MAX.
3. Stage temperature = 160°C MAX.

Die attach

1. Silver epoxy with a maximum cure temperature of 125°C is recommended.

Package Assembly Notes

Lead Attach

1. 230°C Solder attach for 5 sec MAX.

CAUTION —

Extremely Static Sensitive Devices

Notes

1. Chip top contact is cathode.
2. Detected output will be negative from the cathode.