SURFACE MOUNT SMMD SILICON MULTIPLIER SERIES (SRD) DIODES IN SOD 323 PACKAGE

MCE METELICS

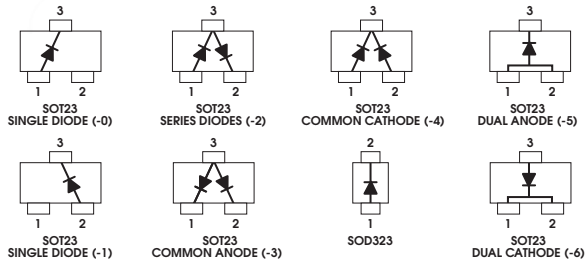
FEATURES

- Low R_s
- Transition Times Down to 65 ps
- Higher Efficiency
- Hi-Rel Available (MIL-S-19500, MIL-STD-750)

APPLICATIONS

- Comb Generator
- Multiplier
- Pulse Generator

Package Terminal Identification Code



MULTIPLIER DIODES ELECTRICAL SPECIFICATIONS @ 25°C

Part Number	V_{BR} Min. (V) @10uA	C_{J6} Typ. (pF)	T Typ. (ns)	t_t Typ. (ps)
SMMD805-SOD323	60	2.5–3.5	100	250
SMMD810-SOD323	50	1.5–2.5	70	200
SMMD820-SOD323	40	1.0–1.7	60	110
SMMD830-SOD323	25	0.5–1.0	30	90
SMMD832-SOD323	20	0.4–0.8	20	85
SMMD835-SOD323	20	0.3–0.7	15	80
SMMD837-SOD323	20	0.2–0.4	12	75
SMMD840-SOD323	15	0.2–0.4	10	70

SILICON MULTIPLIER DESCRIPTION

The SMMD series of Metelics Multiplier Diodes are constructed using advanced material and processes, resulting in a lower series resistance (R_s) than is produced with conventional methods. This lower R_s results in faster transition times and higher output frequencies. The lower R_s also reduces loss and therefore results in higher efficiency.

MAXIMUM RATINGS

Storage Temperature ..... -65 to +150° C
Operating Temperture ..... -65 to +150° C
Soldering Temperature ..... 230° C for 30 sec.
DC Power Dissipation ..... 100 mW max.
derate linearly to
0 mW at +150° C

Also available in SOT23 package.

975 Stewart Drive • Sunnyvale, CA 94086 • 408.737.8181 • FAX: 408.733.7645 • www.metelics.com • sales@metelics.com

MAXIMUM RATINGS

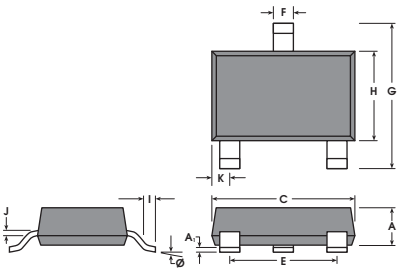
Operating/Storage Temperature Range ... -65°C to +150°C
Max Power Dissipation (per Package) 250mW
Measured in an infinite heat sink at T_{CASE}=25°C).
Derate linearly to zero at 150°C.
Peak inverse Voltage (P_{IV}) ..... Same as V_{BR}
Forward Current (i_F) (1µs pulse) ..... 1 Amp

PACKAGE CHARACTERISTICS

Lead Material ..... Alloy 42
Lead Finish ..... Tin-Lead, 60-40%
Maximum Soldering Temperature ..... 260°C for 5 sec.
Minimum Lead Strength ..... 2 pounds pull
Typical Package Inductance ..... 2 nH
Typical Package Capacitance .... 0.10 pF (opposite leads)

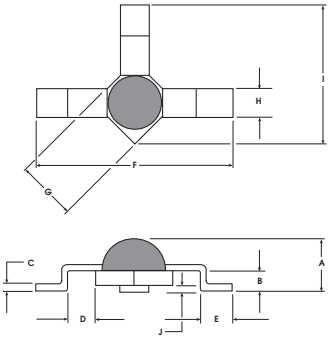
SOT23 PACKAGE OUTLINE

	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.79	1.02	0.031	0.040
A_1	0.02	0.10	0.001	0.004
C	2.67	3.05	0.105	0.120
E	1.80	2.00	0.071	0.079
F	0.38	0.54	0.010	0.021
G	2.10	2.50	0.083	0.098
H	1.20	1.40	0.047	0.055
I	0.13	0.25	0.005	0.010
J	0.089	0.15	0.0035	0.059
K	0.44	0.55	0.017	0.022
Ø	0.0	8.0	0.0	0.0



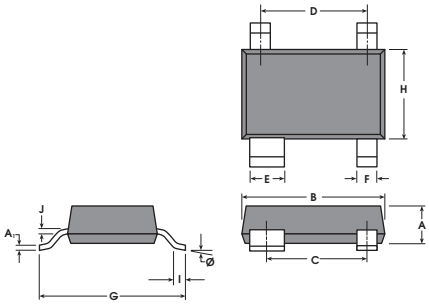
E35SM PACKAGE OUTLINE

	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.53	0.76	0.021	0.030
B	0.20	0.36	0.008	0.014
C	0.08	0.13	0.003	0.05
D	0.30	0.46	0.012	0.018
E	0.56	0.71	0.022	0.028
F	3.76	4.01	0.148	0.158
G	1.19	1.35	0.047	0.053
H	0.33	0.43	0.013	0.017
I	2.77	2.92	0.109	0.115
J	0.05	0.15	0.002	0.006



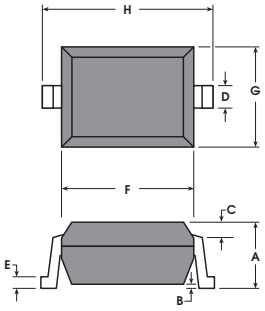
SOT143 PACKAGE OUTLINE

	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.79	1.02	0.031	0.040
A_1	0.02	0.10	0.001	0.004
B	2.67	3.05	0.105	0.120
C	1.78	2.03	0.070	0.080
D	1.80	2.00	0.071	0.079
E	0.77	0.94	0.030	0.037
F	0.38	0.54	0.015	0.021
G	2.10	2.50	0.083	0.098
H	1.20	1.40	0.047	0.065
I	0.13	0.25	0.005	0.010
J	0.89	0.15	0.0035	0.0059
Ø	0.0	8.0	0.0	0.8



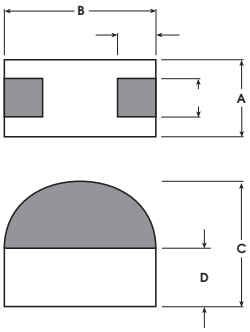
SOD323 PACKAGE OUTLINE

	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	—	1.10	0.034	0.043
B	—	0.10	0.003	0.004
C	—	0.20	0.006	0.010
D	0.25	0.40	0.010	0.016
E	0.08	0.15	0.003	0.006
F	1.60	1.90	0.063	0.075
G	1.15	1.45	0.045	0.057
H	2.30	2.70	0.094	0.106



0805 PACKAGE OUTLINE

	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.14	1.40	0.045	0.055
B	1.91	2.16	0.075	0.085
C	0.63	0.84	0.025	0.033
D	0.38	0.63	0.015	0.025
E	0.30	0.40	0.012	0.016
F	0.76	1.06	0.030	0.040



E28X PACKAGE OUTLINE

	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.63	0.76	0.025	0.030
B	0.20	0.38	0.008	0.015
C	0.10	0.20	0.004	0.008
D	0.50	0.76	0.020	0.030
E	0.25	0.50	0.010	0.020
F	4.11	4.52	0.162	0.178
G	2.16	2.41	0.085	0.095
H	1.02	1.27	0.040	0.050
I	0.38	0.63	0.015	0.025