

Surface Mount Rectifier



Features:

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Easily Cleaned With Alcohol, Isopropanol And Similar Solvents

Mechanical Data:

- Case : JEDEC DO-214AC, molded plastic
- Terminals : Solderable per MIL- STD-202, Method 208
- Polarity : Colour band denotes cathode
- Weight : 0.002oz, 0.064g
- Mounting position : Any

Maximum Ratings and Electrical Characteristics:

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%.

Characteristics	Symbol	ES1G-13-F	Units
Maximum recurrent peak reverse voltage	V_{RRM}	400	V
Maximum RMS voltage	V_{RMS}	280	V
Maximum DC blocking voltage	V_{DC}	400	V
Maximum average forward rectified current at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load at $T_J=125^\circ\text{C}$	I_{FSM}	30	A
Maximum instantaneous forward voltage at 1A	V_F	1.25	V
Maximum reverse current at $T_A=25^\circ\text{C}$ at rated DC blocking voltage at $T_A=125^\circ\text{C}$	I_R	5 200	μA
Typical reverse recovery time (Note 1)	t_{rr}	35	nS
Typical junction capacitance (Note 2)	C_j	19	pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Operating / Storage junction temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

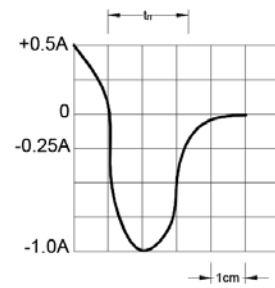
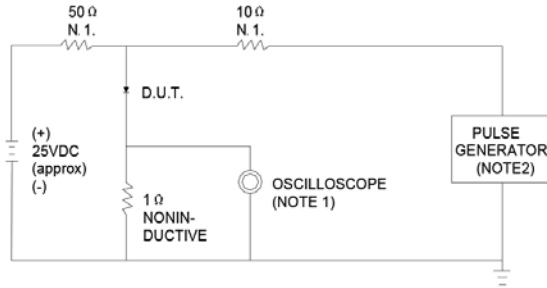
Notes:

(1) Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

(2) Measured at 1MHz and applied reverse voltage of 4V DC.

(3) Thermal resistance from junction to ambient and junction to lead PCB mounted on 0.27" x 0.27" (7 x 7mm²) copper pad areas.

FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ .22pF.
 2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 Ω .

SET TIME BASE FOR 10/15 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

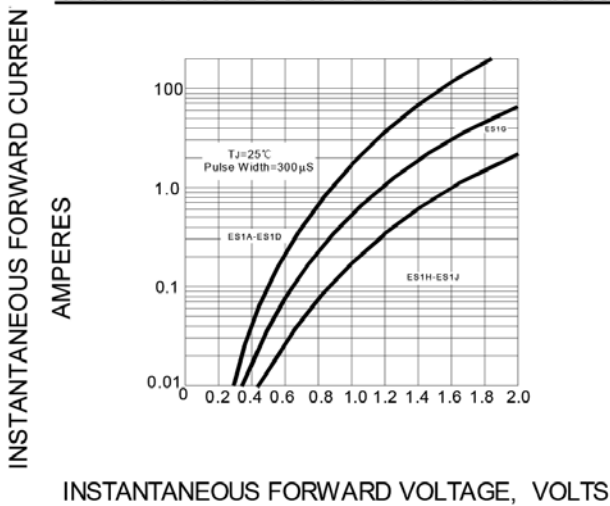


FIG.3 -- FORWARD DERATING CURVE

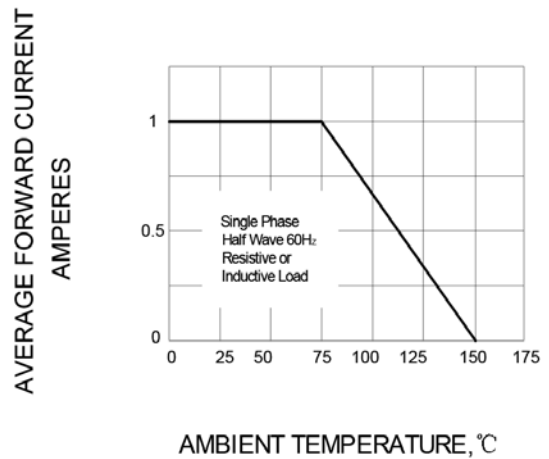


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

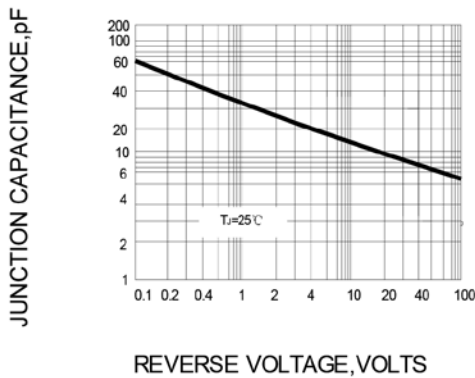
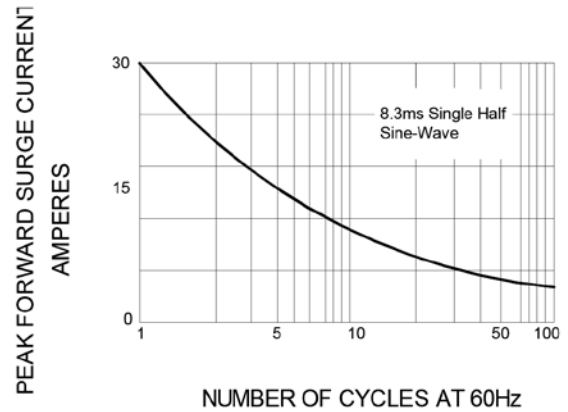
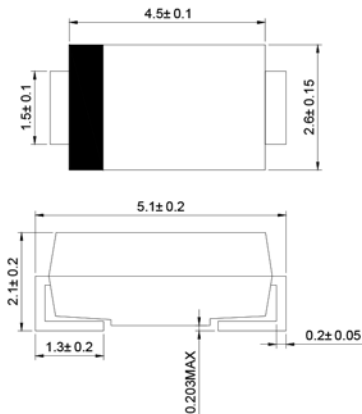


FIG.5 -- PEAK FORWARD SURGE CURRENT



Dimensions:

DO-214AC(SMA)



Dimensions : Millimetres

Part Number Table

Description	Part Number
Surface Mount Rectifier	ES1G-13-F

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