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-214AA, molded plastic
- Terminals : Solderable per MIL- STD-202, Method 208
- Polarity : Colour band denotes cathode
- Weight : 0.003oz, 0.093g
- Mounting position : Any

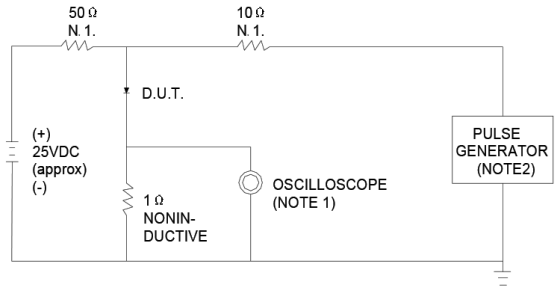
Maximum Ratings and Electrical Characteristics:

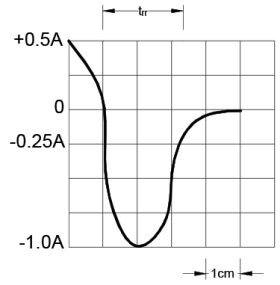
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load,derate by 20%.

Characteristics	Symbol	ES3BB-13-F	ES3DB-13-F	Units
Maximum recurrent peak reverse voltage	V_{RRM}	100	200	V
Maximum RMS voltage	V_{RMS}	70	140	V
Maximum DC blocking voltage	V_{DC}	100	200	V
Maximum average forward rectified current at T_A=100°C	$I_{F(AV)}$	3		A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load at T_J=125°C	I_{FSM}	100		A
Maximum instantaneous forward voltage at 3A	V_F	0.95		V
Maximum reverse current at T_A=25°C at rated DC blocking voltage at T_A=125°C	I_R	10 500		μA
Typical reverse recovery time (Note 1)	t_{rr}	35		nS
Typical junction capacitance (Note 2)	c_j	45		pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	40		°C/W
Operating / Storage junction temperature range	T_J, T_{STG}	-55 to +150		°C

Note:
(1) Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.
(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" × 0.27" '(7 × 7mm^2) 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

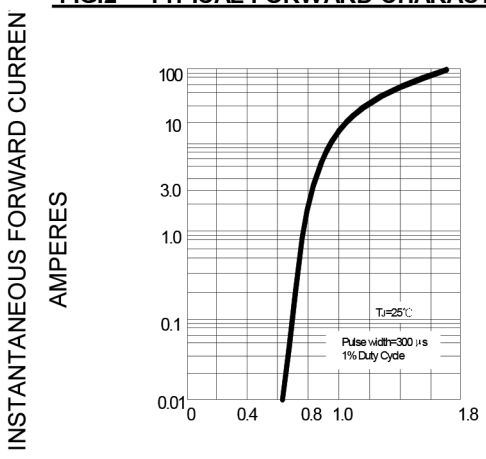


FIG.3 -- FORWARD DERATING CURVE

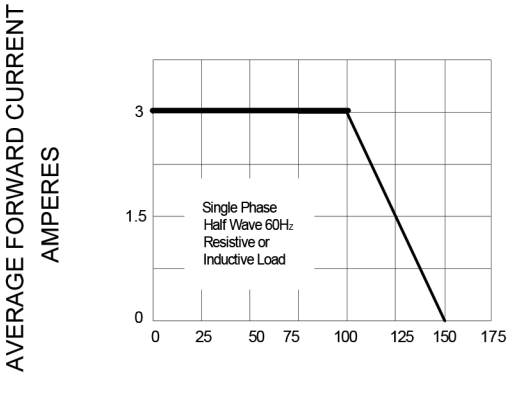


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

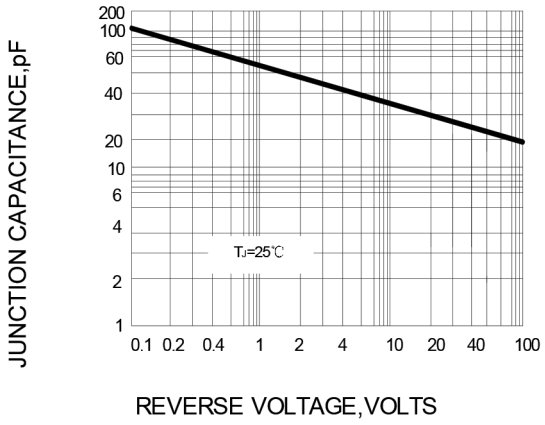
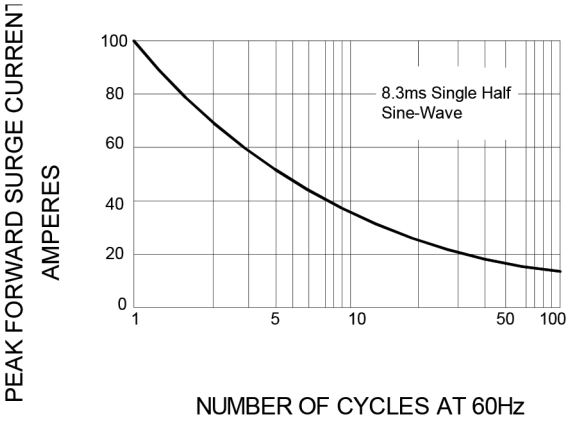
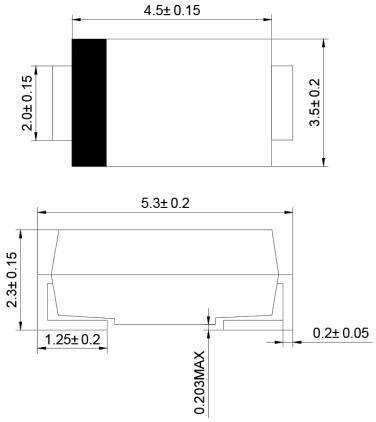


FIG.5 -- PEAK FORWARD SURGE CURRENT



Dimensions:

DO-214AA(SMB)



Dimensions : Millimetres

Part Number Table

Description	Part Number
Surface Mount Rectifier	ES3BB-13-F
	ES3DB-13-F