TAYCHIPST

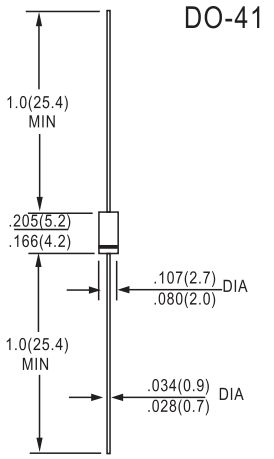
HIGH EFFICIENCY RECTIFIER

ERA38-04 THRU ERA38-06

400V-600V 0.5A

FEATURES

- Low cost
- Diffused junction
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon,Alcohol,Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0



Dimensions in inches and (millimeters)

Mechanical Data

Case : DO-41 Molded plastic
Epoxy : UL94V-O rate flame retardant
Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
Polarity : Color band denotes cathode end
Mounting position : Any
Weight : 0.34 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

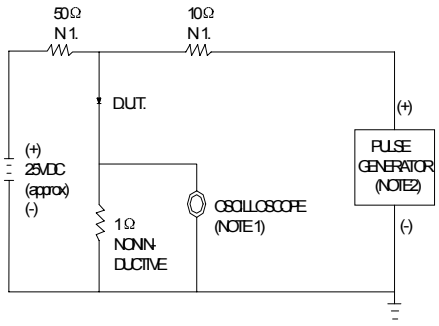
Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

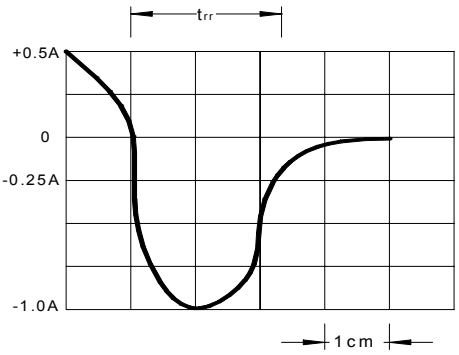
		ERA38 - 04	ERA38 - 05	ERA38 - 06	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	400	500	600	V
Maximum RMS voltage	V_{RMS}	280	350	420	V
Maximum DC blocking voltage	V_{DC}	400	500	600	V
Maximum average forw ard rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	0.5			A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T_J=125℃	I_{FSM}	10.0			A
Maximum instantaneous forw ard voltage @ 0.5A	V_F	2.50			V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=100℃	I_R	5.0 50.0			μA
Maximum reverse recovery time (Note1)	t_{rr}	50			ns
Typical junction capacitance (Note2)	C_J	20		15	pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	60			℃/W
Operating junction temperature range	T_J	- 55 ----- + 150			℃
Storage temperature range	T_{STG}	- 55 ----- + 150			℃

NOTE: 1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.
2. Measured at 1.0MH_Z and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to ambient.

RATINGS AND CHARACTERISTIC CURVES ERA38-04 THRU ERA38-06

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=50Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.2 --FORWARD DERATING CURVE

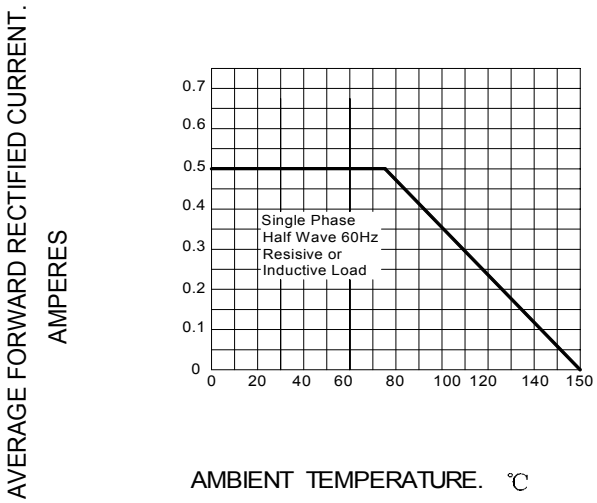


FIG.3--TYPICAL JUNCTION CAPACITANCE

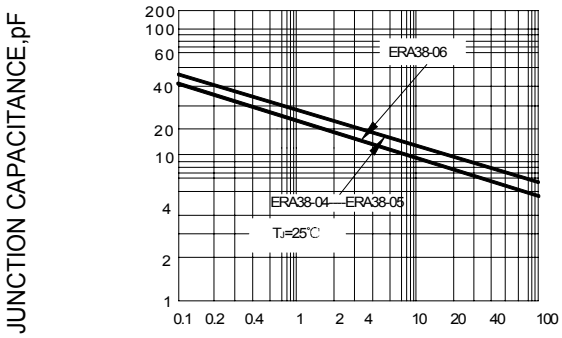


FIG.4--PEAK FORWARD SURGE CURRENT

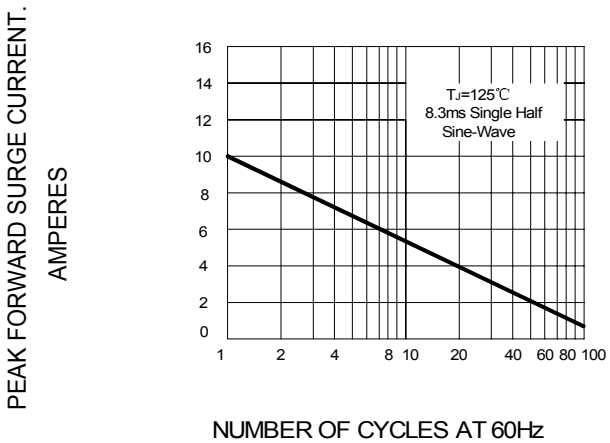


FIG.5 -- TYPICAL FORWARD CHARACTERISTIC