



TAYCHIPST

Glass Passivated High Efficient Plastic Rectifiers

EGP10A THRU EGP10M

50V-1000V 1.0A

FEATURES

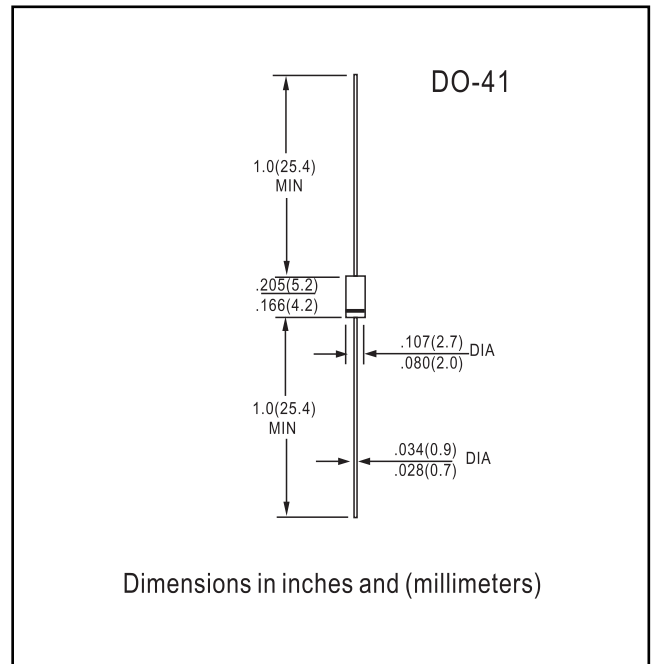
- Superefficient structure for high reliability condition
- Cavity-free glass-passivated junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

MECHANICAL DATA

Case: DO-204AL, molded epoxy over glass body
Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS compliant, commercial grade
Base P/NHE3 - RoHS compliant, AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Type Number	Symbol	EGP	EGP	EGP	EGP	EGP	EGP	EGP	EGP	Units
		10A	10B	10D	10F	10G	10J	10K	10M	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ T _A = 55°C	I _(AV)	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30.0								A
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	0.95		1.25		1.7			V	
Maximum DC Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =125°C	I _R	5.0 100.0								uA uA
Maximum Reverse Recovery Time (Note 1) T _J =25°C	T _{rr}	50				75				nS
Typical Junction Capacitance (Note 2)	C _j	20			15					pF
Typical Thermal Resistance (Note 3)	R _{θJA}	70								°C/W
Operating Temperature Range	T _J	-65 to + 150								°C
Storage Temperature Range	T _{STG}	-65 to + 150								°C

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.



RATINGS AND CHARACTERISTICS CURVES

EGP10A THRU EGP10M

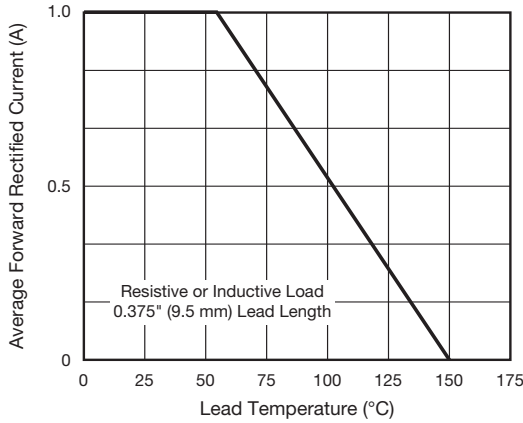


Fig. 1 - Maximum Forward Current Derating Curve

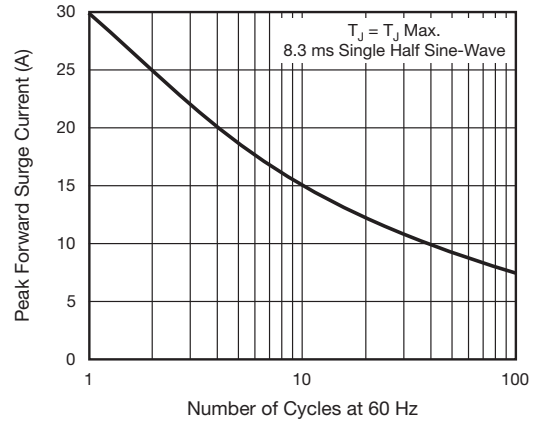


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

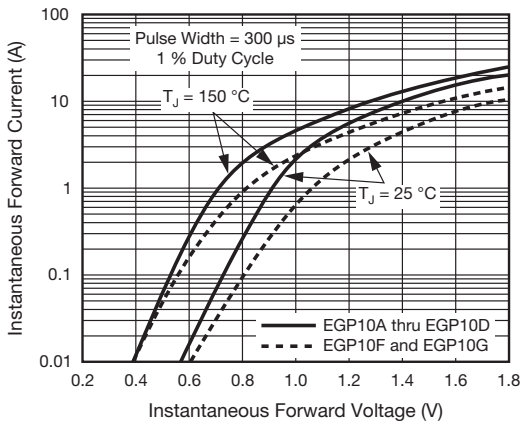


Fig. 3 - Typical Instantaneous Forward Characteristics

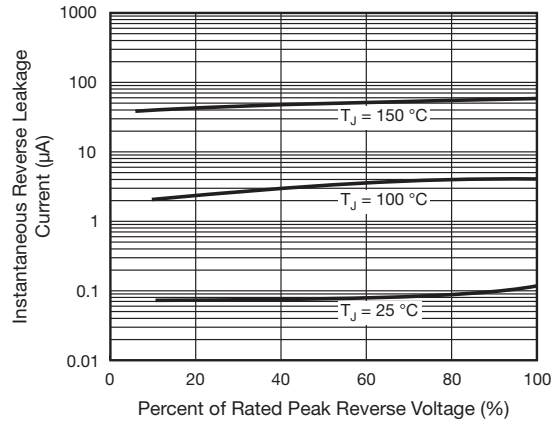


Fig. 4 - Typical Reverse Leakage Characteristics

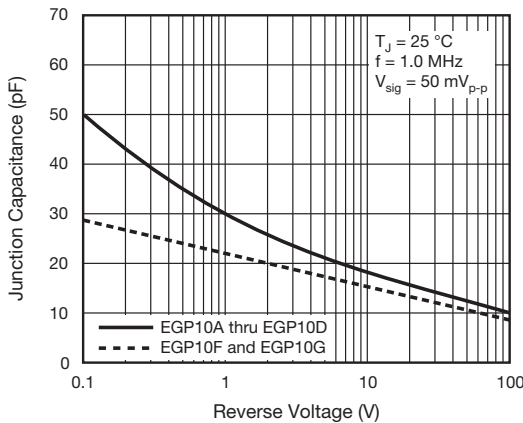


Fig. 5 - Typical Junction Capacitance

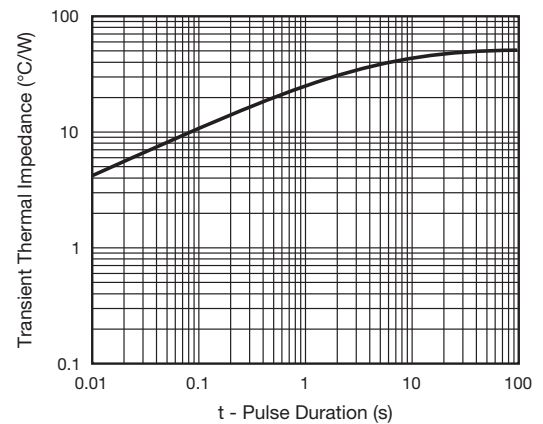


Fig. 6 - Typical Transient Thermal Impedance