

CURRENT 40 Ampere
VOLTAGE RANG 200 to 1000 Volts

SFP4002 THRU SFP4010

Features

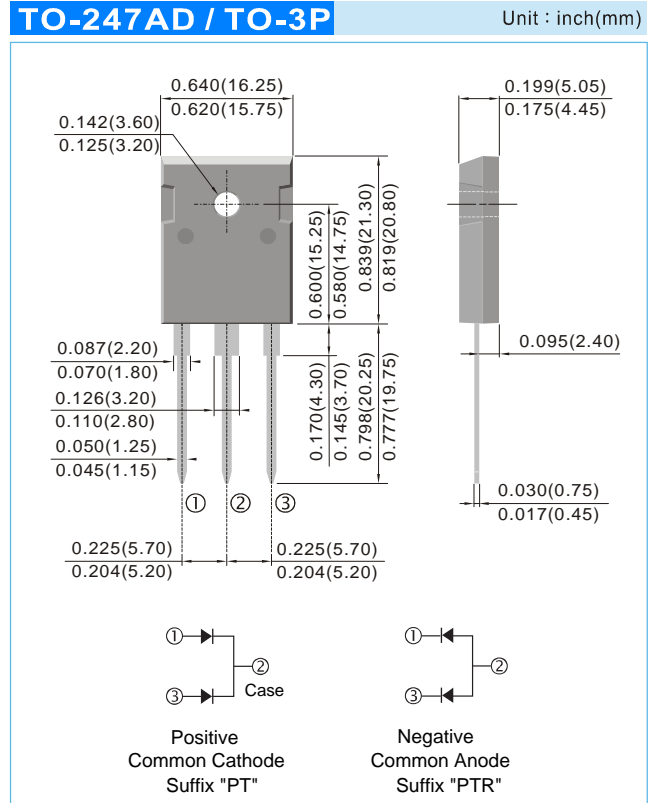
- * Fast switching for high efficiency
- * Low forward voltage drop
- * High current capability
- * Low reverse leakage current
- * High surge current capability

Application

- * Automotive Inverters and Solar Inverters
- * Plating Power Supply, Motor Control, SMPS and UPS
- * Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- * Case: Heatsink TO-247AD/247S/3P open metal package
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solderable per MIL-STD-202 method 208
- * Polarity: As marked on diode body
- * Mounting position: Any
- * Weight: 0.65 gram approximately



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	SFP4002	SFP4004	SFP4006	SFP4008	SFP4010	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	200	400	600	800	1000	V
Maximum Average Forward Rectified Current Tc=125°C (Total Device 2x20A=40A)	IF(AV)	40.0					A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	400					A
Maximum Instantaneous Forward Voltage @ 20.0 A (Per Diode/Per Leg)	VF	0.98	1.3	1.5	1.7	1.9	V
Maximum DC Reverse Current @Tj=25°C At Rated DC Blocking Voltage @Tj=125°C	IR	10 500					uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35			50		nS
Typical junction Capacitance (Note 2)	CJ	150					pF
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to +150					°C

NOTES : (1) Reverse recovery test conditions IF = 0.5A IR = 1.0A Irr = 0.25A.

(2) Thermal Resistance junction to terminal.

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

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RATING AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

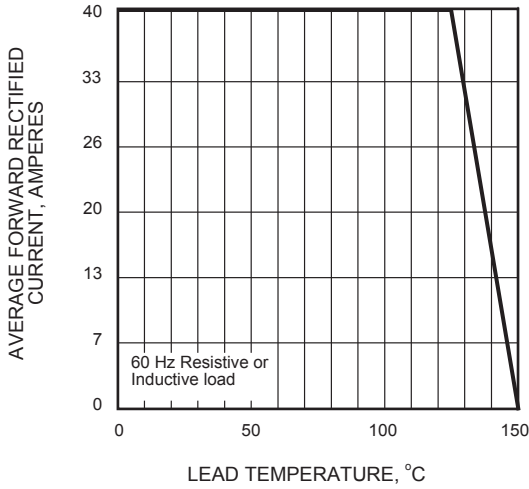


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

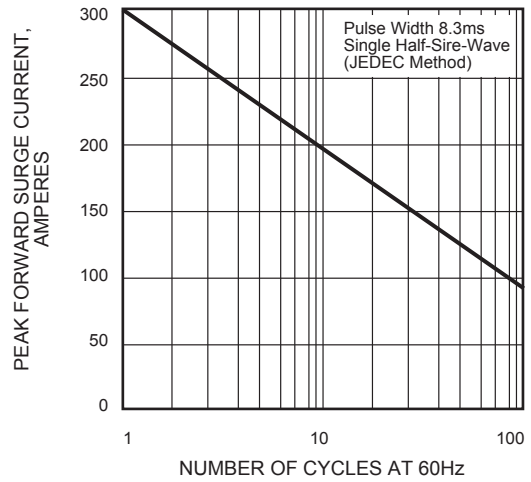


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

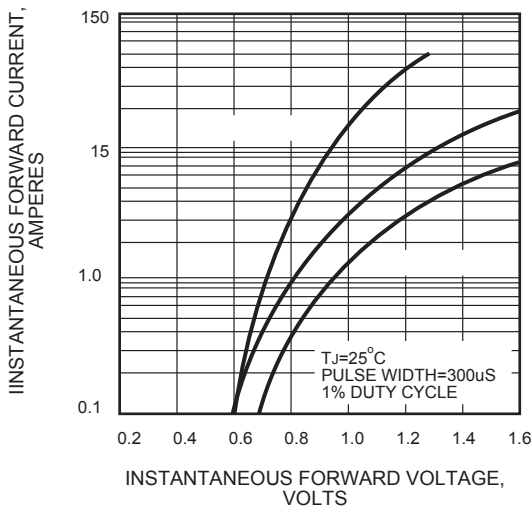


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

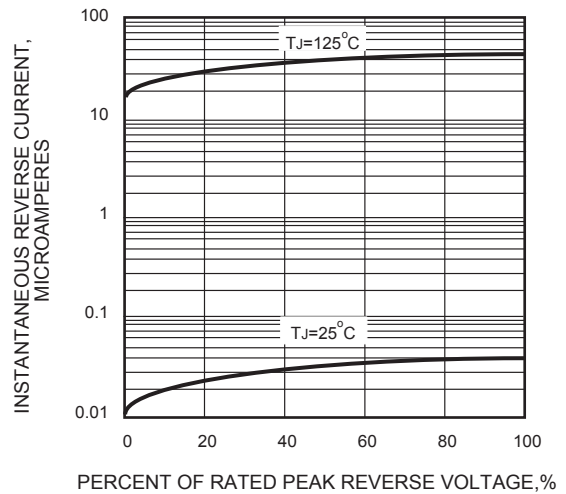
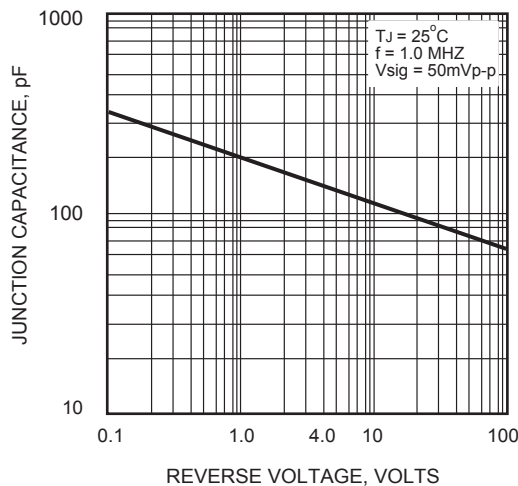


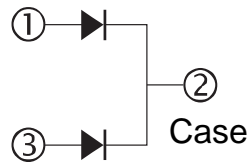
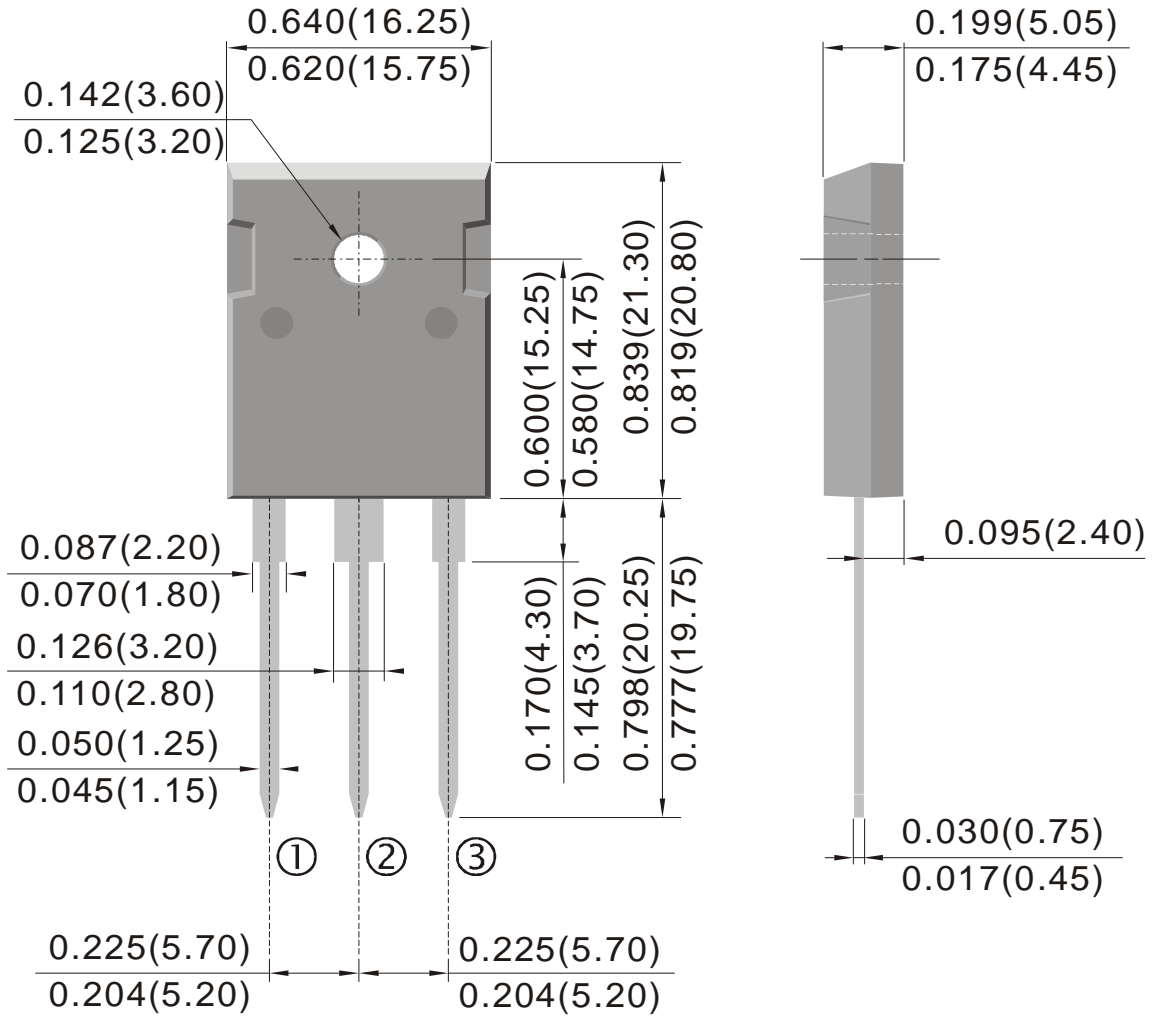
FIG.5 - TYPICAL JUNCTION CAPACITANCE



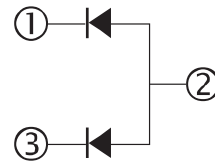
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T0-247AD



Positive
 Common Cathode
 Suffix "PT"



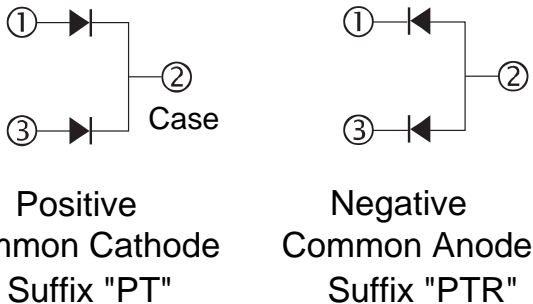
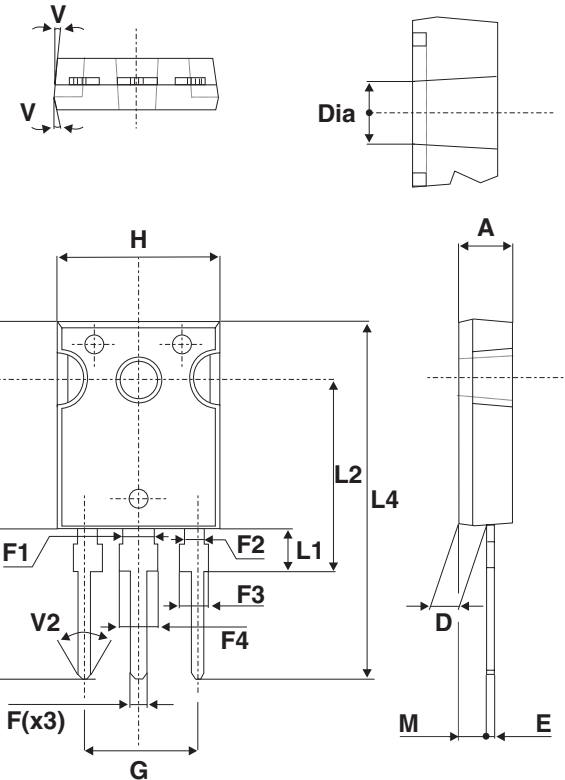
Negative
 Common Anode
 Suffix "PTR"

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T0-247S

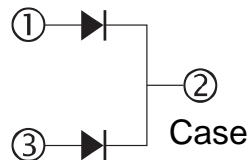
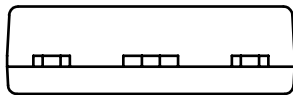
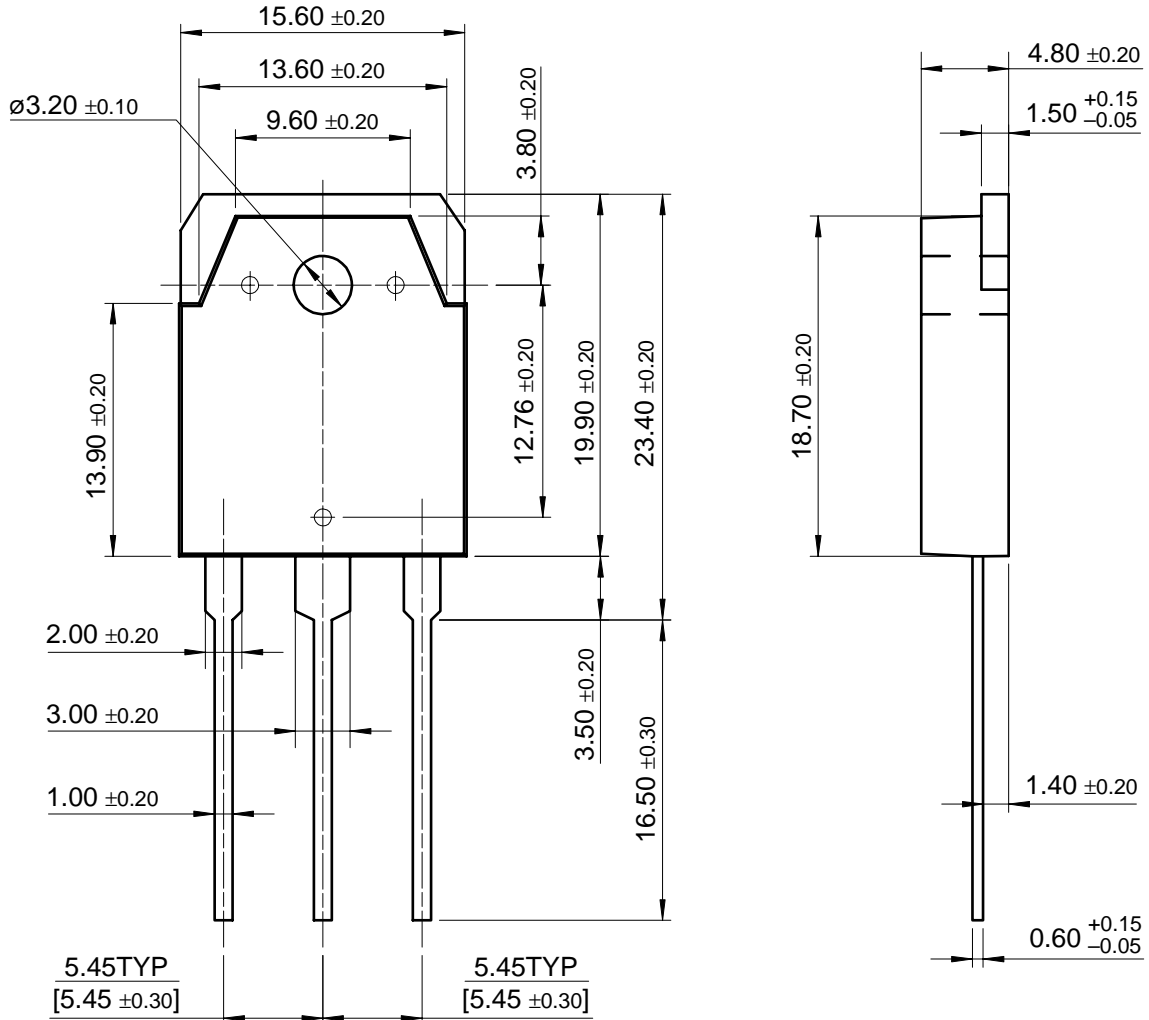
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.85		5.16	0.191		0.203
D	2.20		2.60	0.086		0.102
E	0.40		0.80	0.015		0.031
F	1.00		1.40	0.039		0.055
F1		3.00			0.118	
F2		2.00			0.079	
F3	1.90		2.40	0.075		0.094
F4	3.00		3.40	0.118		0.134
G		10.90			0.429	
H	15.45		16.03	0.608		0.631
L	19.85		21.09	0.781		0.830
L1	3.70		4.30	0.146		0.169
L2	18.30		19.13	0.720		0.753
L3	14.20		20.30	0.559		0.799
L4	34.05		41.38	1.341		1.629
L5	5.35		6.30	0.211		0.248
M	2.00		3.00	0.079		0.118
V		5°			5°	
V2		60°			60°	
Dia.	3.55		3.65	0.140		0.144



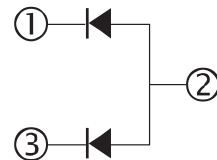
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TO-3P



Positive
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