

CURRENT 20 Ampere
 VOLTAGE RANG 200 to 400 Volts

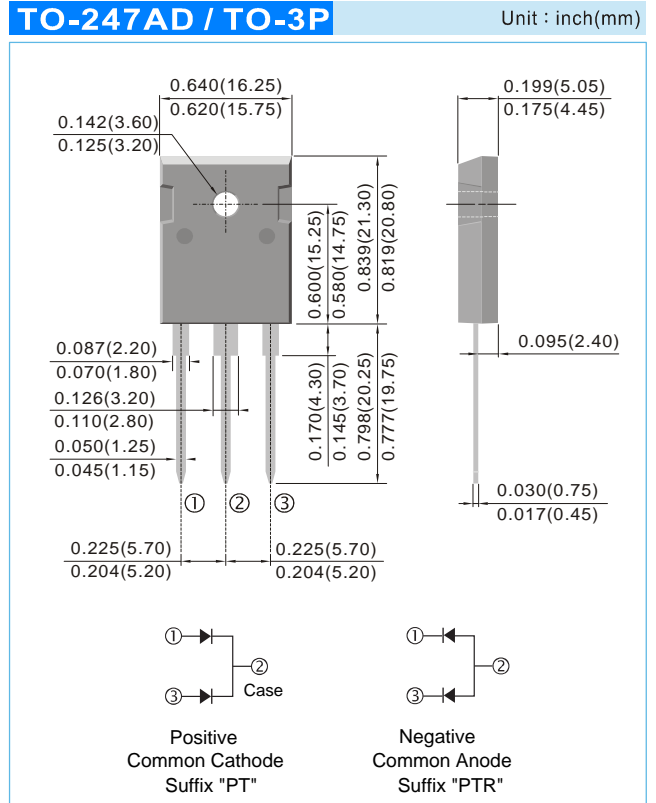
D92-02 THRU D92-04

Features

- ◆ Ultrafast 35 Nanosecond Recovery Time
- ◆ 175° C Operating Junction Temperature
- ◆ Popular TO-247 Package
- ◆ Low VF
- ◆ High Temperature Glass Passivated Junction
- ◆ Low Forward Voltage
- ◆ Low Leakage Current
- ◆ Reverse Voltage to 200 Volts
- ◆ Pb-Free Packages are Available

APPLICATIONS

- High speed power switching
- Plating Power Supply
- Converter & Chopper
- Inversion Welder
- PFC
- Ultrasonic Cleaner and Welder



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	D92-02	D92-03	D92-04	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	V
Maximum RMS Voltage	V _{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	200	400	600	V
Maximum Average Forward Rectified Current T _C =125°C (Total Device 2x10A=20A)	I _{F(AV)}	20.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200			A
Maximum Instantaneous Forward Voltage @ 10.0 A (Per Diode/Per Leg)	V _F	0.85	1.05	1.25	V
Maximum DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =125°C	I _R	10			uA
		500			uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35			nS
Typical junction Capacitance (Note 2)	C _J	85			pF
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150			°C

NOTES : (1) Reverse recovery test conditions I_F = 0.5A I_R = 1.0A I_{rr} = 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

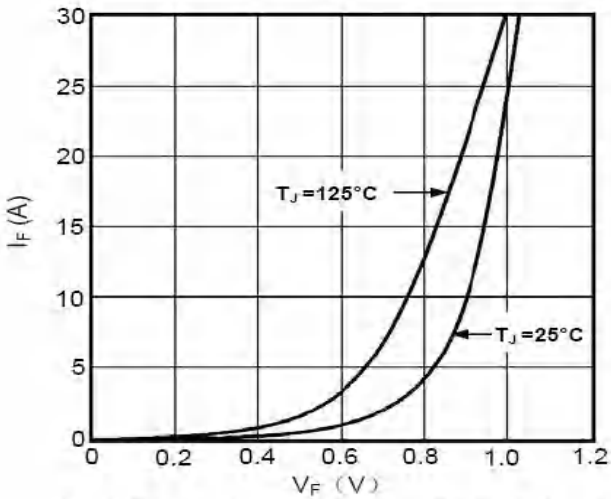


Fig1. Forward Voltage Drop vs Forward Current

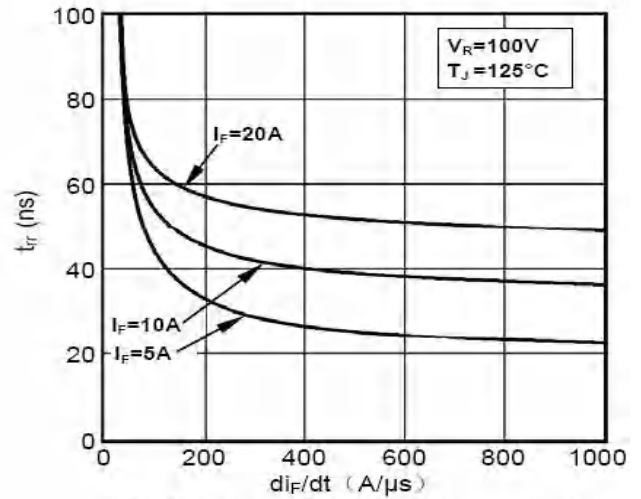


Fig2. Reverse Recovery Time vs di_F/dt

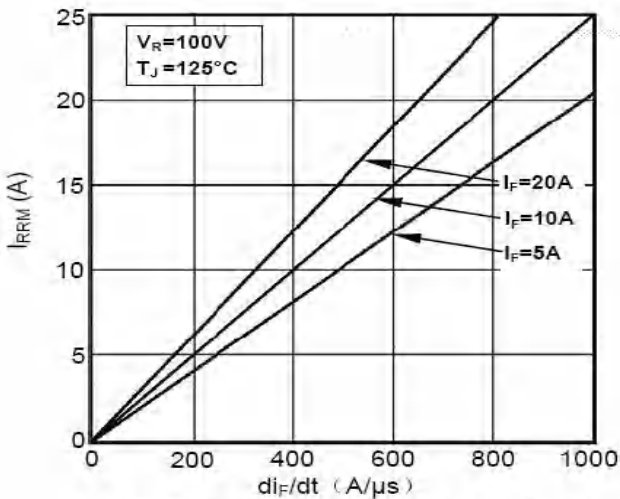


Fig3. Reverse Recovery Current vs di_F/dt

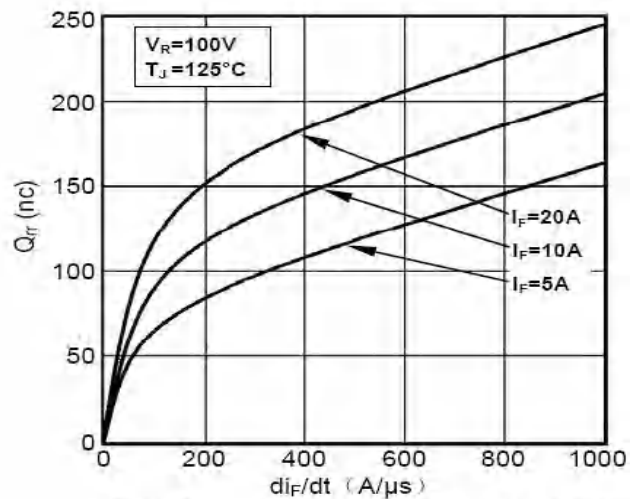


Fig4. Reverse Recovery Charge vs di_F/dt

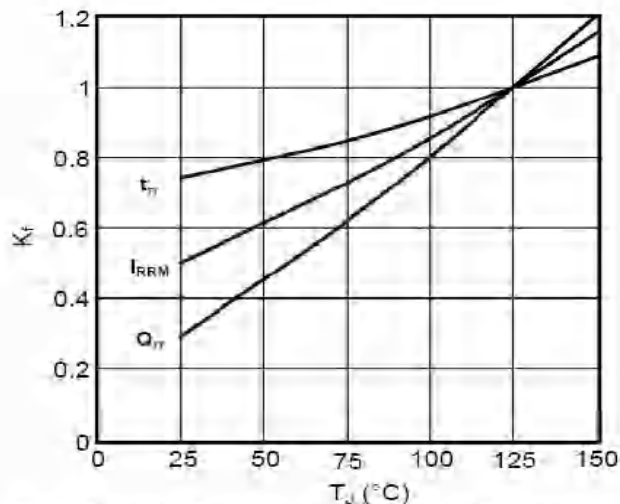


Fig5. Dynamic Parameters vs Junction Temperature

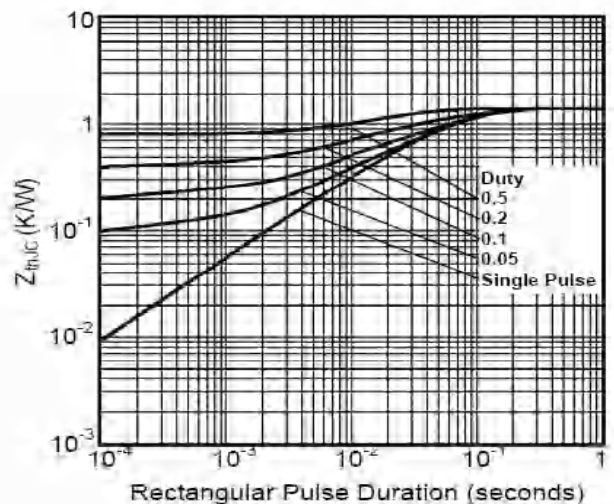
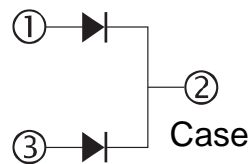
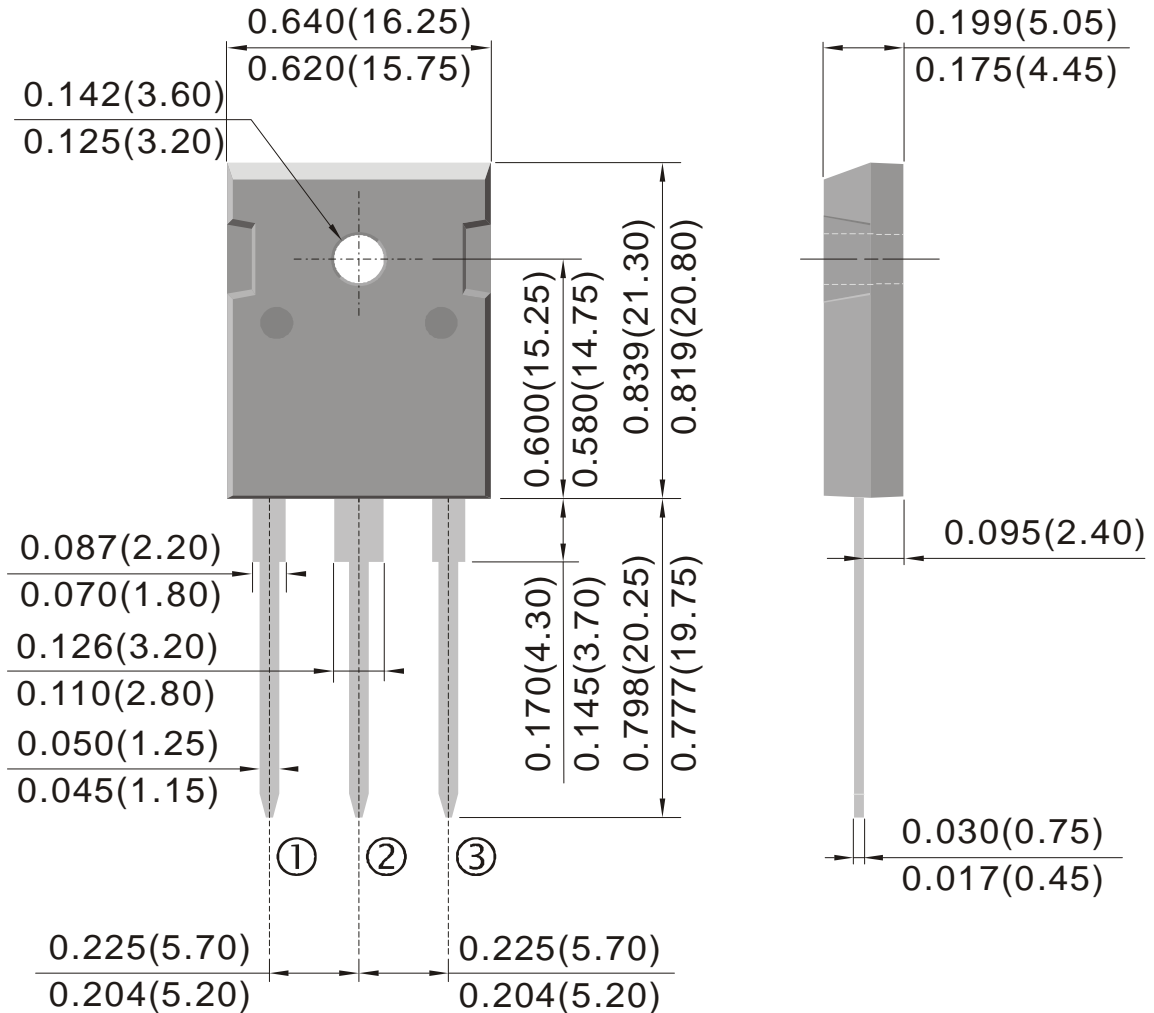


Fig6. Transient Thermal Impedance

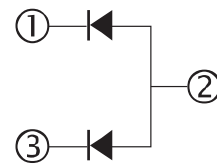
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TO-247AD



Positive
 Common Cathode
 Suffix "PT"



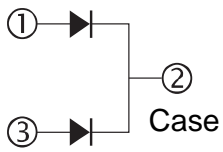
Negative
 Common Anode
 Suffix "PTR"

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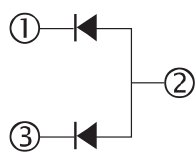
D92-02 THRU D92-04

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



Positive
Common Cathode
Suffix "PT"

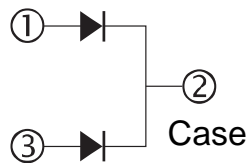
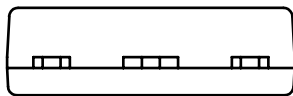
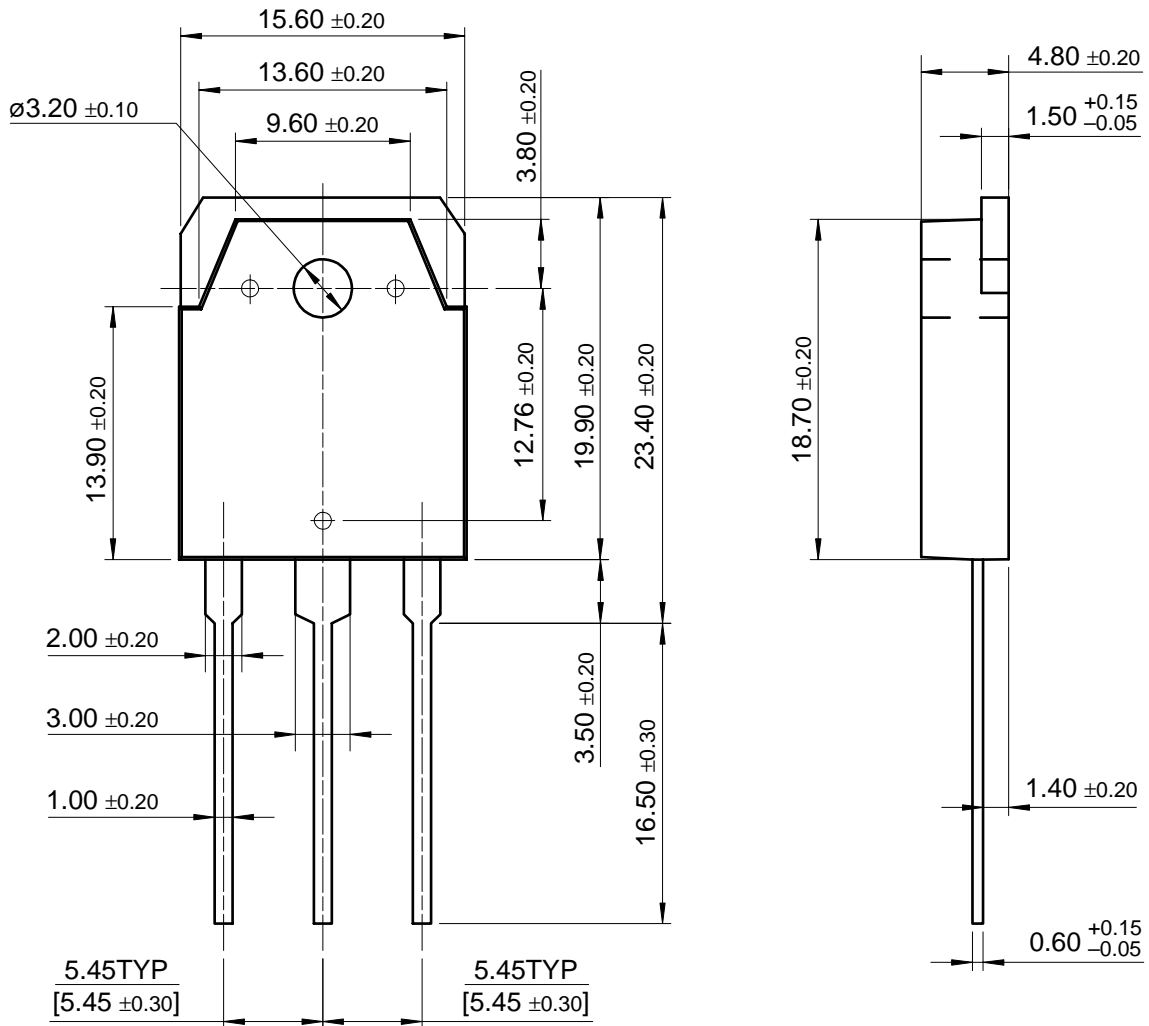


Negative
Common Anode
Suffix "PTR"

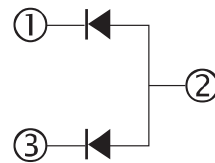
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D92-02 THRU D92-04

TO-3P



Positive
Common Cathode
Suffix "PT"



Negative
Common Anode
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