

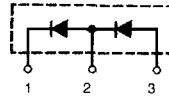
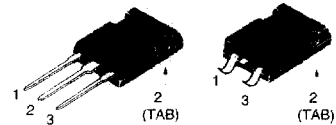
Phase-leg Rectifier Diode

$$V_{RRM} = 1200/1600 \text{ V}$$

$$I_{F(RMS)} = 2 \times 43 \text{ A}$$

$$I_{F(AV)M} = 2 \times 28 \text{ A}$$

V_{RSM} V	V_{RRM} V	TO-247 AD Type	TO-247 SMD Type
1300	1200	DSP 25-12A	DSP 25-12AS
1700	1600	DSP 25-16A	DSP 25-16AS


TO-247 AD
TO-247 SMD


1 = Cathode, 2= Anode/Cathode, 3 = Anode
TAB = Anode/Cathode

Symbol	Test Conditions	Maximum Ratings
$I_{F(RMS)}$	$T_{VJ} = T_{VJM}$	43 A
$I_{F(AV)M}$	$T_{case} = 100^\circ\text{C}$; 180° sine	28 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; t = 10 ms (50 Hz), sine	300 A
	t = 8.3 ms (60 Hz), sine	330 A
	$T_{VJ} = 150^\circ\text{C}$; t = 10 ms (50 Hz), sine	270 A
	t = 8.3 ms (60 Hz), sine	300 A
Pt	$T_{VJ} = 45^\circ\text{C}$; t = 10 ms (50 Hz), sine	450 A ² s
	t = 8.3 ms (60 Hz), sine	450 A ² s
	$T_{VJ} = 150^\circ\text{C}$; t = 10 ms (50 Hz), sine	340 A ² s
	t = 8.3 ms (60 Hz), sine	325 A ² s
T_{VJ}		-40...+180 °C
T_{VJM}		180 °C
T_{stg}		-40...+150 °C
M_d	Mounting torque, TO-247 AD	1.13/10 Nm/lb.in.
Weight	TO-247 SMD/TO-247 AD	4/6 g

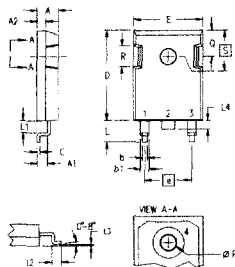
Features

- International standard packages JEDEC TO-247 AD and TO-247 SMD surface mountable
- For single and three phase bridge configuration
- Planar passivated chips
- Epoxy meets UL 94V-0 flammability classification

Symbol	Test Conditions	Characteristic Values
I_R	$T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$	≤ 2 mA
V_F	$I_F = 55 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	≤ 1.6 V
V_{TO}	For power-loss calculations only	0.8 V
r_T	$T_{VJ} = T_{VJM}$	15 mΩ
R_{thJC}	DC current	1.5 K/W
R_{thCK}	DC current (with heatsink compound)	1.9 K/W
a	Maximum allowable acceleration	100 m/s ²

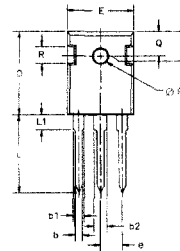
TO-247 SMD Outline

1. Gate
2. Collector
3. Emitter
4. Collector



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.83	5.21	.190	.205
A1	2.28	2.54	.090	.100
A2	1.91	2.16	.075	.085
b	1.14	1.40	.045	.055
b1	1.91	2.13	.075	.084
C	0.61	0.80	.024	.031
D	20.80	21.34	.819	.840
E	15.75	16.13	.620	.635
e	5.45	BSC	.215	BSC
L	4.90	5.10	.193	.201
L1	2.70	2.90	.106	.114
L2	2.10	2.30	.083	.091
L3	0.00	0.10	.00	.004
L4	1.90	2.10	.075	.083
ØP	3.55	3.65	.140	.144
Q	5.59	6.20	.220	.244
R	4.32	4.83	.170	.190
S	6.15	BSC	.242	BSC

Data according to IEC 60747 and refer to a single diode
IXYS reserves the right to change limits, test conditions and dimensions

TO-247 AD Outline


Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.7	5.3	.185	.209
A1	2.2	2.54	.087	.102
A2	2.2	2.6	.059	.098
b	1.0	1.4	.040	.055
b1	1.65	2.13	.065	.084
b2	2.87	3.12	.113	.123
C	.4	.8	.016	.031
D	20.80	21.46	.819	.845
E	15.75	16.26	.610	.640
e	5.20	5.72	.205	.225
L	19.81	20.32	.780	.800
L1		4.50		.177
ØP	3.55	3.65	.140	.144
Q	5.89	6.40	0.232	0.252
R	4.32	5.49	.170	.216
S	6.15	BSC	.242	BSC