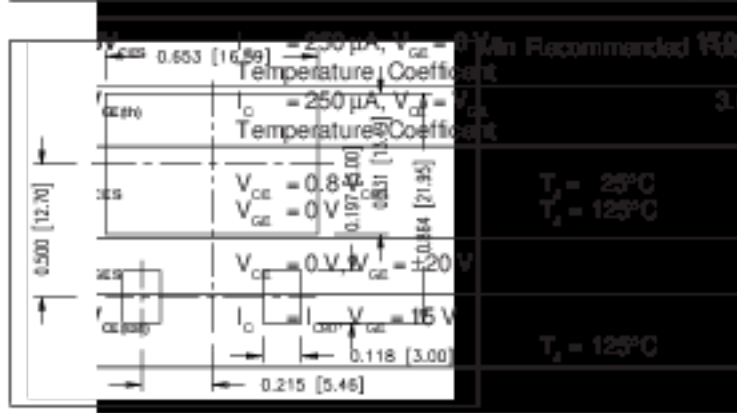


Symbol	Test Conditions	Characteristic Values
	High Voltage, High Gain MOSFET™ Monolithic Bipolar MOS Transistor	IXBT170
g_{fs}	$V_{GS} = 10V, V_{DS} = 10V, f = 100kHz, V_{CE(sat)} \leq 2\%$	4.0 min. 8.5 max.
C_{iss}	Prelinearity Data, $f = 1MHz$	700
C_{oss}		40
C_{res}		12
Q_{rr}		30
Q_{ge}	$T_J = 25^\circ C$ to $150^\circ C$	6
Q_{gc}	$T_J = 25^\circ C$ to $150^\circ C; R_{DS(on)} = 1M\Omega$	10
$t_{d(on)}$	$T_J = 25^\circ C$ to $150^\circ C; R_{DS(on)} = 1M\Omega$	35
t_{r1}	Inductively Loaded, $50\mu H, 25^\circ C$	28
$t_{d(off)}$	$I_D = I_{T(on)}$ at $15V$	500
t_{n1}	$V_{GS} = 0.8V, R_D = R_{DS(on)} = 56\Omega$	1000
E_{off}	$T_J = 90^\circ C$	6
$t_{d(on)}$	$T_J = 25^\circ C, 1ms$	35
t_{r1}	SOA, $V_{GS} = 15V, T_J = 125^\circ C, R_D = 33\Omega$	128
E_{on}	Resonant Inductively Loaded, $50\mu H$	167
$t_{d(off)}$	$I_D = I_{T(on)}, V_{GS} = 0.8V$	600
t_{n1}	$V_{GS} = 0.8V, R_D = R_{DS(on)} = 56\Omega$	1200
E_{off}		8
R_{thJC}	Maximum Lead temperature for soldering	0.69 K/W
R_{thCK}	0.8 mm (0.031 in.) from case for 10 s	0.25 K/W
	Maximum Tab temperature for soldering SMD devices for	288

Reverse Plate	Mounting torque (M3) (TO-247)	Characteristic Values
Weight	TO-247 AD	10.44 g (0.368 oz.)
Symbol	Test Conditions	min. typ. max.
V_r	$I_D = I_{DSS}, V_{GS} = 0V$, Pulse test, $t \leq 300\mu s$, duty cycle $d \leq 2\%$	3.0 V
I_{RM}	Test Conditions	10 A
t_r	$V_{GS} = 10V, V_{DS} = 100V$	300 ns



TO-247 AD Outline	TO-268 Outline
$V_{CE(sat)} = 1700V$	$V_{CE(sat)} = 1700V$
$I_{C25} = 20A$	$I_{C25} = 20A$
$V_{CE(800)} = 3.8V$	$V_{CE(800)} = 3.8V$

TO-247 AD Outline	TO-268 Outline
Dim.	Min. Max.
A	4.7 5.9
A1	2.2 2.5
A2	2.2 2.9
b	1.0 1.4
b1	1.05 2.19
c	2.87 3.12
C	0.10 0.15
D	0.10 0.15
E	0.10 0.15
F	0.10 0.15
G	0.10 0.15
H	0.10 0.15
I	0.10 0.15
J	0.10 0.15
K	0.10 0.15
L	0.10 0.15
M	0.10 0.15
N	0.10 0.15
O	0.10 0.15
P	0.10 0.15
Q	0.10 0.15
R	0.10 0.15
S	0.10 0.15

TO-247 AD Outline	TO-268 Outline
Features	Features
• High Blocking Voltage	• High Blocking Voltage
• JEDEC TO-247 surface and JEDEC TO-247 AD	• JEDEC TO-247 surface and JEDEC TO-247 AD
• Low conduction losses	• Low conduction losses
• High current handling capability	• High current handling capability
• MOSFET Gate turn-on - drive simplicity	• MOSFET Gate turn-on - drive simplicity
• Molding epoxies meet UL 94 V-0 flammability classification	• Molding epoxies meet UL 94 V-0 flammability classification

Applications	Advantages
SYM	MIN. MAX. MIN. MAX.
A	1.0 1.4 1.0 1.4
A1	1.0 1.4 1.0 1.4
A2	1.0 1.4 1.0 1.4
b	1.0 1.4 1.0 1.4
b1	1.0 1.4 1.0 1.4
b2	1.0 1.4 1.0 1.4
C	1.0 1.4 1.0 1.4
C2	1.0 1.4 1.0 1.4
D	1.0 1.4 1.0 1.4
D1	1.0 1.4 1.0 1.4
E	1.0 1.4 1.0 1.4
E1	1.0 1.4 1.0 1.4
F	1.0 1.4 1.0 1.4
F1	1.0 1.4 1.0 1.4
G	1.0 1.4 1.0 1.4
H	1.0 1.4 1.0 1.4
I	1.0 1.4 1.0 1.4
J	1.0 1.4 1.0 1.4
K	1.0 1.4 1.0 1.4
L	1.0 1.4 1.0 1.4
L1	1.0 1.4 1.0 1.4
L2	1.0 1.4 1.0 1.4
L3	1.0 1.4 1.0 1.4
L4	1.0 1.4 1.0 1.4