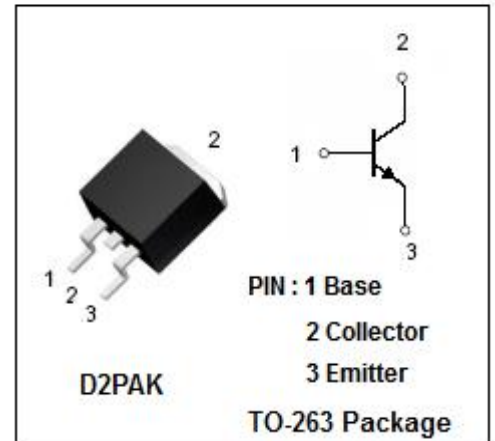


isc Silicon NPN Power Transistor
MJB44H11
DESCRIPTION

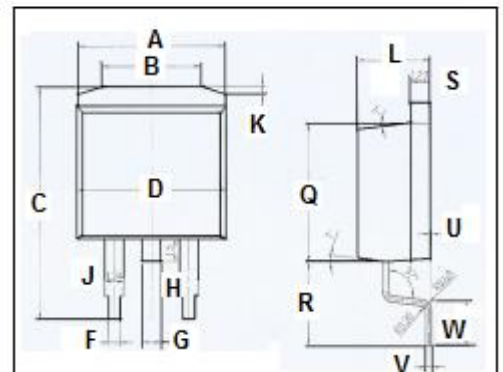
- Low Collector-Emitter saturation voltage
- Pb-free package are available
- Fast switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- General purpose amplification and switching such as out or driver stages in applications such as switching regulators, converters and power amplifiers


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_{CP}	Collector Current-Pulse	20	A
P_C	Total Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Total Power Dissipation @ $T_c=25^\circ\text{C}$	50	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	75	$^\circ\text{C}/\text{W}$

isc Silicon NPN Power Transistor

MJB44H11

ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	80			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C =8A; I _B = 0.4A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =8A; I _B = 0.4A			1.5	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 80V; I _E = 0			10	uA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			50	uA
h _{FE1}	DC Current Gain	I _C = 2A; V _{CE} = 1V	60			
h _{FE2}	DC Current Gain	I _C = 4A; V _{CE} = 1V	40			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		50		MHz
C _{OB}	Output Capacitance	I _E =0; V _{CB} =10V; f= 1.0MHz		130		pF
Switching times						
t _s	Storage Time	I _C = 5A, I _{B1} = I _{B2} = 0.5A		0.5		μ s
t _f	Fall Time			0.14		μ s

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.