



MJD44H11 MJD45H11

COMPLEMENTARY SILICON PNP TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- LOW COLLECTOR-EMITTER SATURATION VOLTAGE
- FAST SWITCHING SPEED
- SURFACE-MOUNTING TO-252 (DPAK) POWER PACKAGE IN TAPE & REEL (SUFFIX "T4")

APPLICATIONS

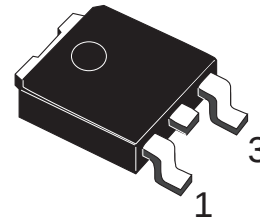
- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIER

DESCRIPTION

The MJD44H11 is a Silicon Multiepitaxial Planar NPN transistor mounted in DPAK plastic package.

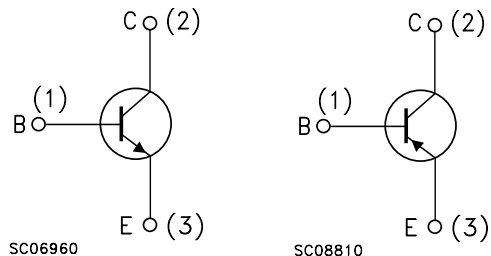
It is intended for various switching and general purpose applications.

The complementary PNP type is MJD45H11



**DPAK
TO-252**
(Suffix "T4")

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	NPN	Value	Unit
		PNP	MJD45H11	
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)		80	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)		5	V
I_C	Collector Current		8	A
I_{CM}	Collector Peak Current		16	A
P_{tot}	Total Dissipation at $T_c \leq 25^\circ\text{C}$		20	W
T_{stg}	Storage Temperature		-55 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature		150	$^\circ\text{C}$

For PNP types the values are intended negative.

MJD44H11 / MJD45H11

THERMAL DATA

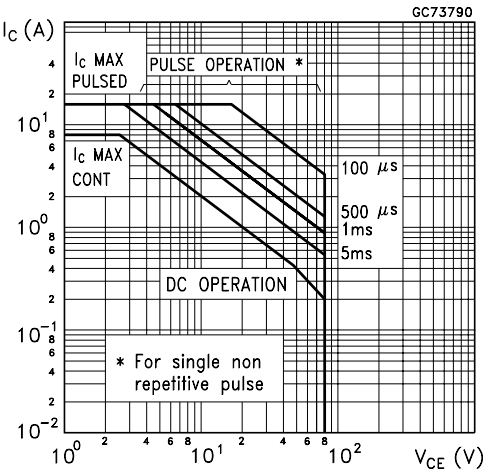
Rthj-case	Thermal Resistance Junction-case	Max	6.25	°C/W
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ELECTRICAL CHARACTERISTICS (Tcase = 25 °C unless otherwise specified)

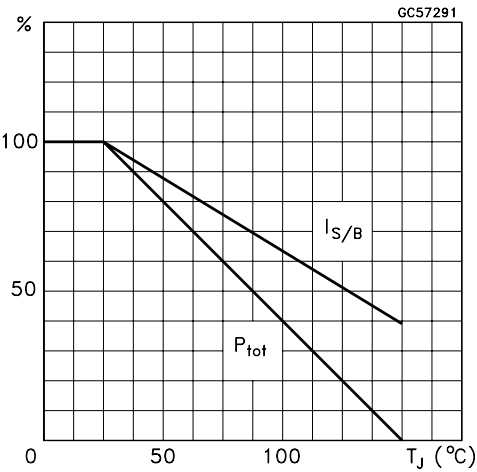
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
VCEO(sus)*	Collector-Emitter Sustaining Voltage	IC = 30 mA	80			V
ICES	Collector Cut-off Current	VCB = rated VCEO VBE = 0			10	µA
IEBO	Emitter Cut-off Current	VEB = 5V			50	µA
VCE(sat)*	Collector-Emitter Saturation Voltage	IC = 8 A IB = 0.4 A			1	V
VBE(sat)*	Base-Emitter Saturation Voltage	IC = 8 A IB = 0.8 A			1.5	V
hFE*	DC Current Gain	IC = 2 A VCE = 1 V IC = 4 A VCE = 1 V	60 40			

* Pulsed: Pulse duration = 300 µs, duty cycle ≤ 2 %
* For PNP types the values are intended negative.

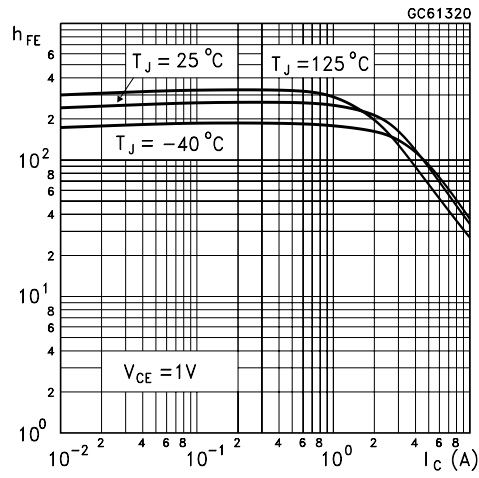
Safe Operating Area



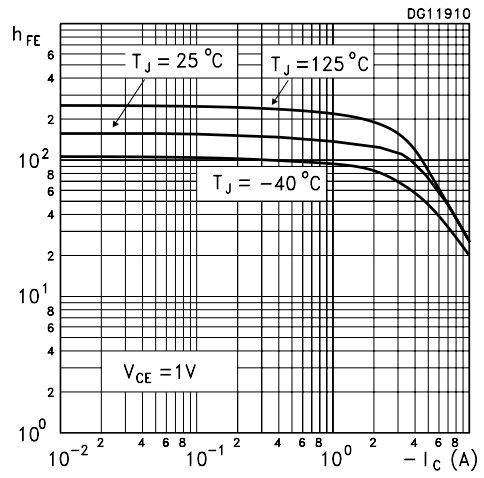
Derating Curves



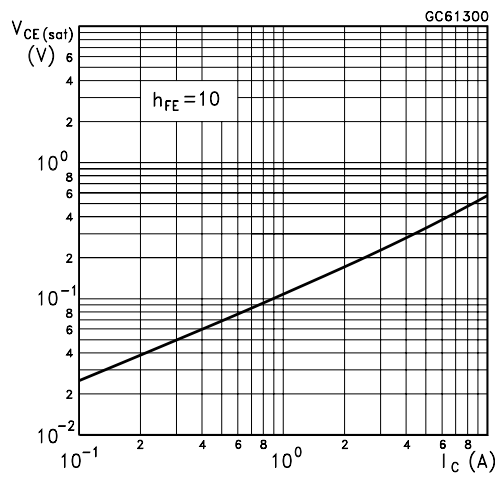
DC Current Gain (NPN type)



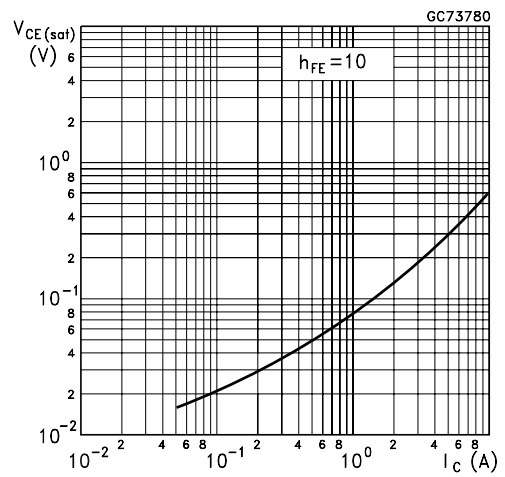
DC Current Gain (PNP type)



Collector-Emitter Saturation Voltage (NPN type)

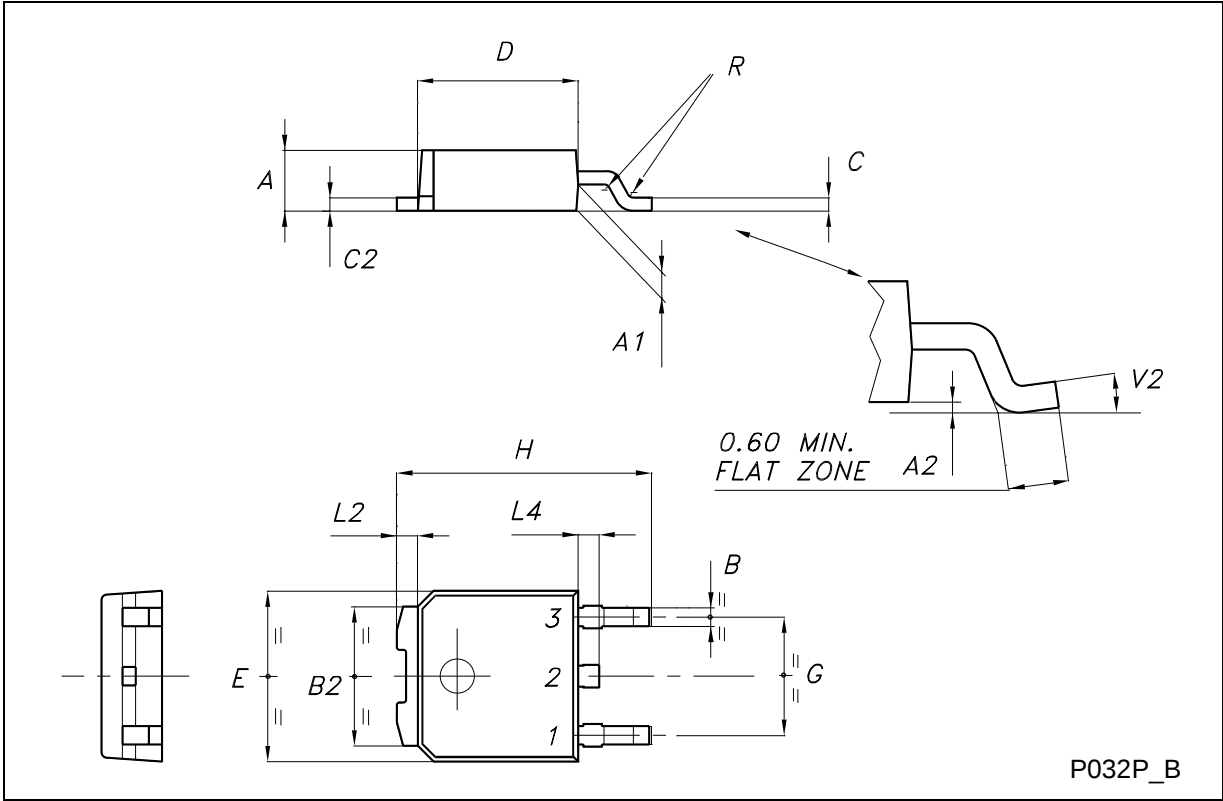


Collector-Emitter Saturation Voltage (PNP type)



TO-252 (DPAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.20		2.40	0.087		0.094
A1	0.90		1.10	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.90	0.025		0.035
B2	5.20		5.40	0.204		0.213
C	0.45		0.60	0.018		0.024
C2	0.48		0.60	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.60	0.252		0.260
G	4.40		4.60	0.173		0.181
H	9.35		10.10	0.368		0.398
L2		0.8			0.031	
L4	0.60		1.00	0.024		0.039
V2	0°		8°	0°		0°



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