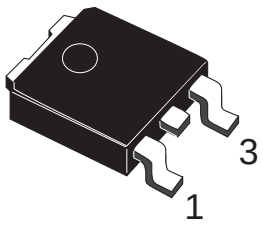
MJD44H11
MJD45H11

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")



DPAK
TO-252
(Suffix "T4")

APPLICATIONS

- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE AMPLIFIER

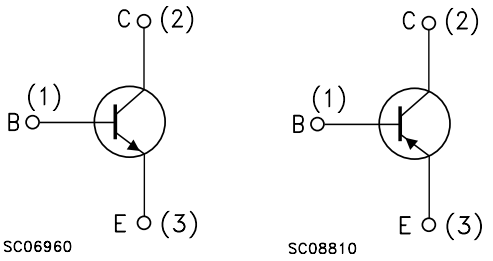
DESCRIPTION

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

It is inteded for various switching and general purpose applications.

The complementary PNP type is MJD45H11

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
		NPN	MJD44H11	
		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 $T_c \leq 25\ ^oC$		20	W
T_{stg}	Storage Temperature		-55 to 150	^oC
T_j	Max. Operating Junction Temperature		150	^oC

For PNP types the values are intented negative.

THERMAL DATA

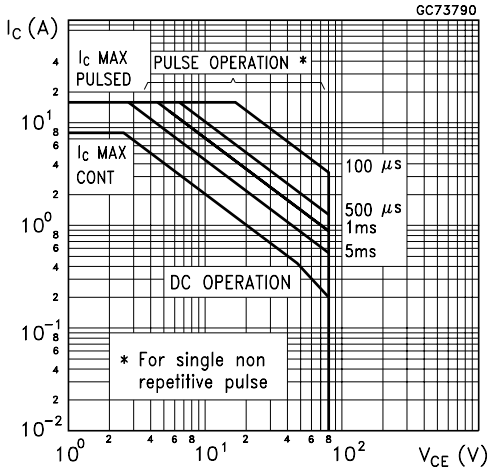
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	6.25	$^oC/W$

ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^oC unless otherwise specified)

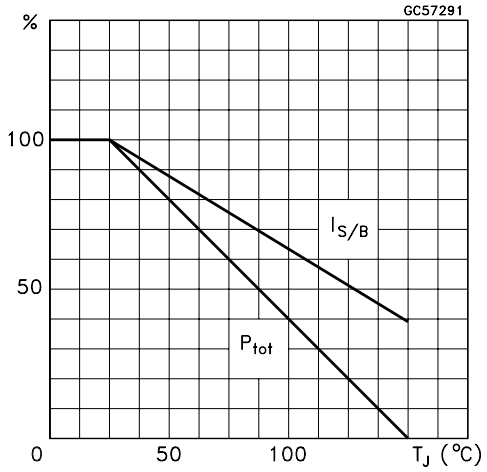
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage	I_C = 30 mA	80			V
I_{CES}	Collector Cut-off Current	V_{CB} = rated V_{CEO} V_{BE} = 0			10	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V			50	µA
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 8 A I_B = 0.4 A			1	V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = 8 A I_B = 0.8 A			1.5	V
h_{FE}*	DC Current Gain	I_C = 2 A V_{CE} = 1 V I_C = 4 A V_{CE} = 1 V	60 40			

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

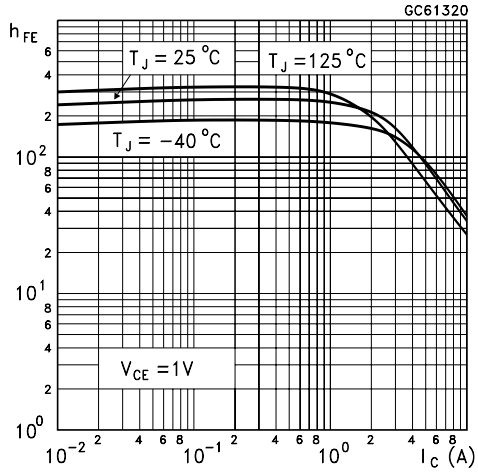
Safe Operating Area



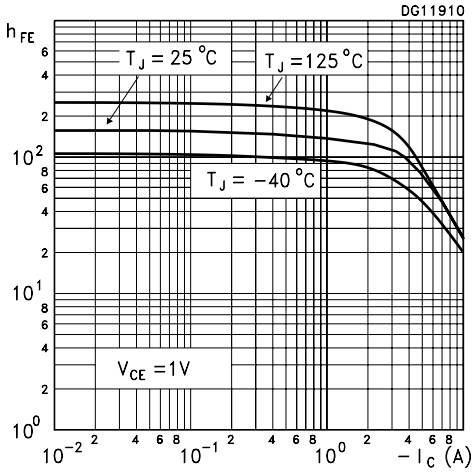
Derating Curves



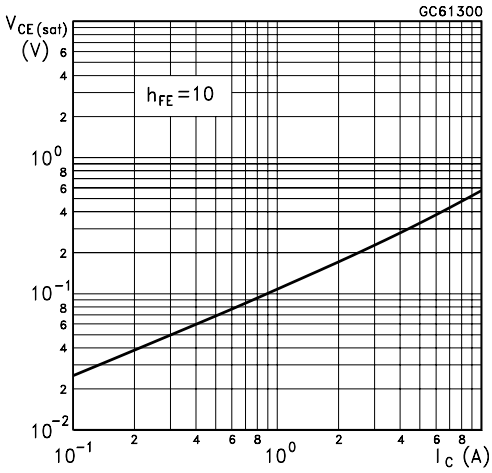
DC Current Gain (NPN type)



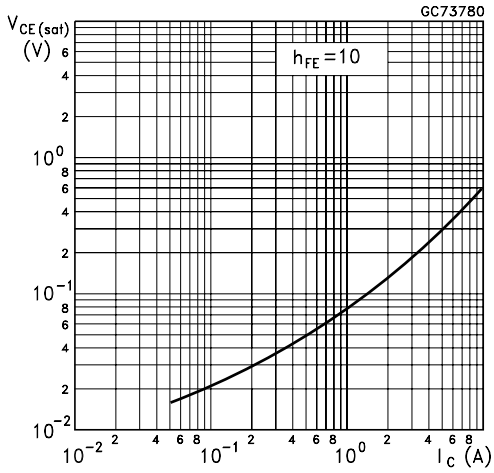
DC Current Gain (PNP type)



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^o		8^o	0^o		0^o