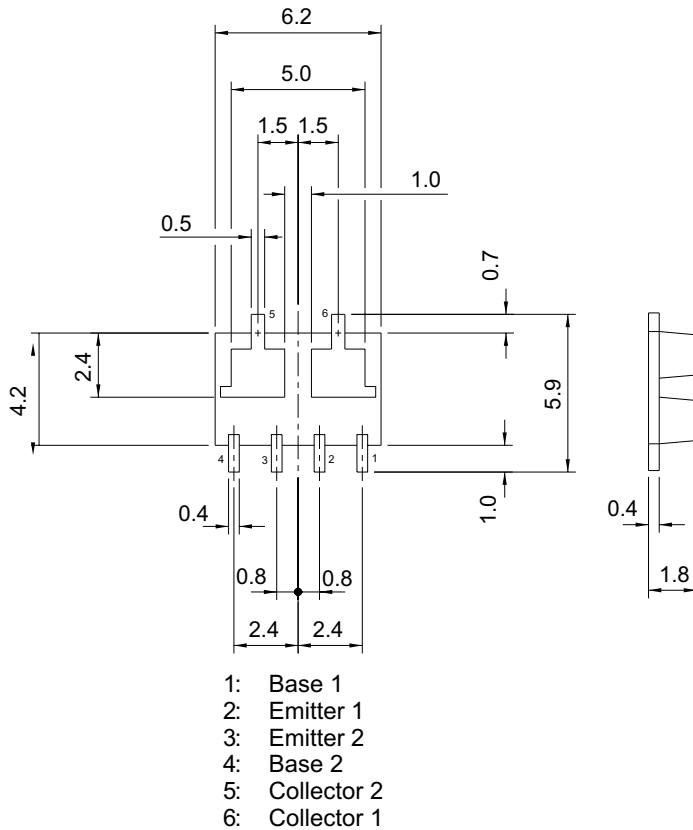


MECHANICAL DATA

Dimensions in mm



NPN EPITAXIAL PLANAR SILICON TRANSISTOR

Ideal For High current Switching Application

FEATURES

- LOW $V_{CE(SAT)}$
- HIGH CURRENT CAPACITY
- FAST SWITCHING SPEED

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector – Base voltage	60V
V_{CEO}	Collector – Emitter voltage ($I_B = 0$)	50V
V_{EBO}	Emitter – Base voltage	6V
I_C	Collector current	5A
I_{CP}	Collector Current (Pulse)	8A
I_B		1A
P_C	Collector Dissipation (Mounted on Ceramic Board (750mm ² x 0.8mm))	1.5W
P_T	Total Dissipation (Mounted on Ceramic Board (750mm ² x 0.8mm))	2W
T_j	Junction Temperature	150°C
T_{stg}	Storage Temperature	-55 to 150°C

DYNAMICS CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
$V_{(BR)CEO}$	Collector – Emitter Base Breakdown Voltage $I_C = 1mA$ $R_{BE} = 00$	50			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage $I_C = 10\mu A$ $I_E = 0$	60			V
$V_{(BR)EBO}$	Emitter Base Breakdown Voltage $I_E = -10\mu A$ $I_C = 0$	6			V
I_{CBO}	Collector Cut-Off Current $V_{CB} = 40V$ $I_E = 0$			1	μA
I_{EBO}	Emitter Cut-Off Current $V_{EB} = 5V$ $I_C = 0$			1	
h_{FE1}^*	DC Current Gain $V_{CE} = 2V$ $I_C = 500mA$	140		400	—
h_{FE2}^*	DC Current Gain $V_{CE} = 2V$ $I_C = 3A$	35			
h_{FE}	DC Current Gain Ratio (small/large) $V_{CE} = 2V$ $I_C = 500mA$	0.8			
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage $I_C = 3A$ $I_B = 150mA$		220	400	mV
$V_{BE(sat)}$	Base – Emitter Saturation Voltage $I_C = 3A$ $I_B = 60mA$		0.95	1.3	V
f_T	Gain Bandwidth Product $V_{CE} = 5V$ $I_C = 500mA$		180		MHz
C_{ob}	Output Capacitance $V_{CB} = 10V$ $f = 1MHz$		40		pF
t_{on}	Turn – On Time See specified test circuit		50		ns
t_{stg}	Storage Time See specified test circuit		500		
t_f	Fall Time See specified test circuit		20		

Switching Time Test Circuit
