Plastic-Encapsulate Transistors

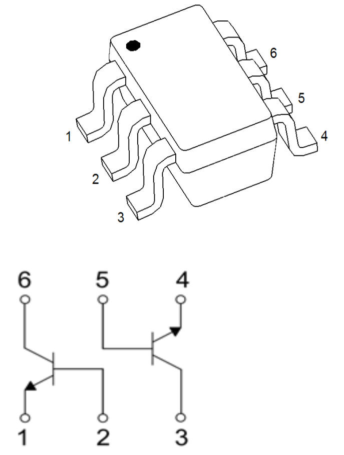
DUAL TRANSISTOR (NPN+NPN)

FEATURE

Complementary PNP Type available MMDTSS8550F

MARKING: DY1

SOT-23 -6L



MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

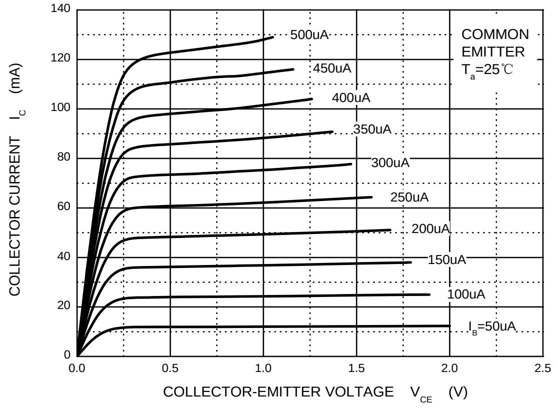
Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	25	V
Emitter-base voltage	V_{EBO}	5	V
Collector continuous current	I_C	1.5	A
Collector power dissipation	P_C	300	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	°C/W
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

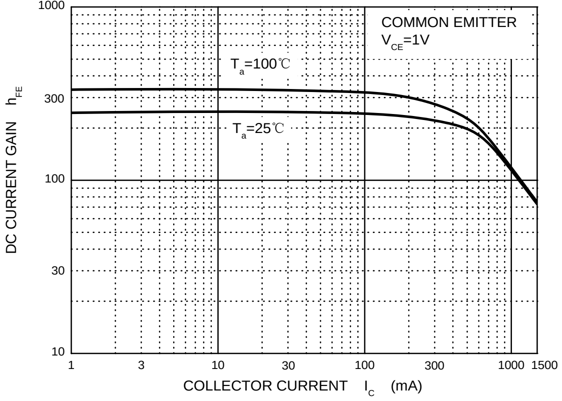
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0A	40	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 0.1mA, I_B = 0A	25	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 100μA, I_C = 0A	5	-	-	V
Collector-base cut-off current	I_{CBO}	V_{CB} = 40V, I_E = 0A	-	-	0.1	μA
Collector cut-off current	I_{CEO}	V_{CE} = 20V, I_B = 0A	-	-	0.1	μA
Emitter-base cut-off current	I_{EBO}	V_{EB} = 5V, I_C = 0A	-	-	0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE} = 1V, I_C = 100mA	200	-	350	-
	$h_{FE(2)}$	V_{CE} = 1V, I_C = 800mA	40	-	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 800mA, I_B = 80mA	-	-	0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 800mA, I_B = 80mA	-	-	1.2	V
Transition frequency	f_T	V_{CE} = 10V, I_C = 50mA, f = 30MHz	100	-	-	MHz

Typical Characteristics

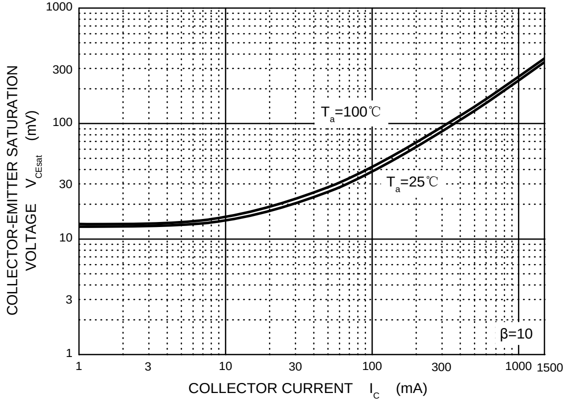
Static Characteristic



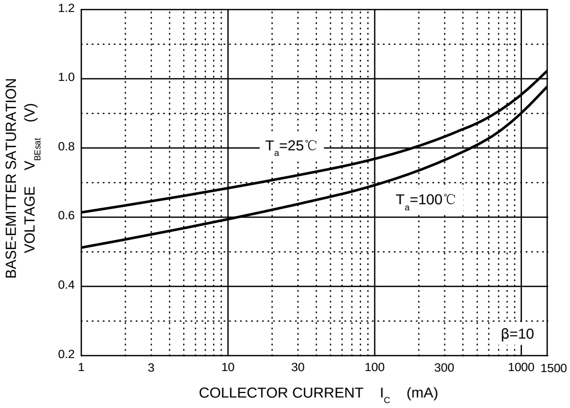
h_{FE} —— I_C



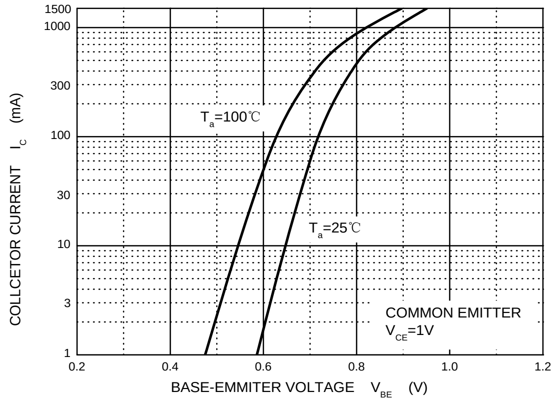
V_{CEsat} —— I_C



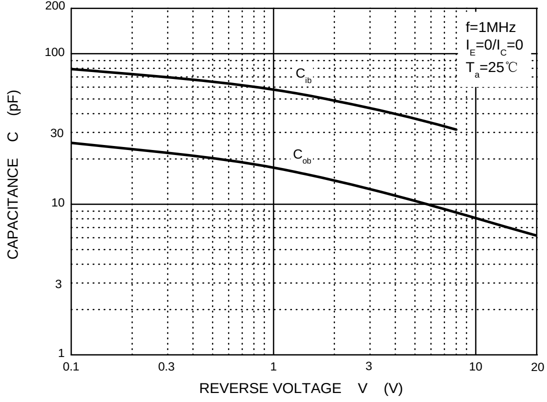
V_{BEsat} —— I_C



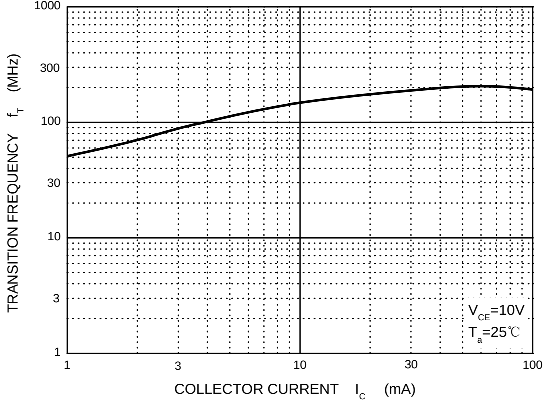
V_{BE} —— I_C



C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}



f_T —— I_C



P_C —— T_a