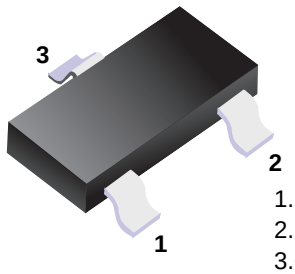
PNP Silicon Epitaxial Planar Transistor

for general purpose application, darlington transistor



1.Base
2.Emitter
3.Collector

SOT-23

Marking Code	
MMBTA63	**2U**
MMBTA64	**2V**

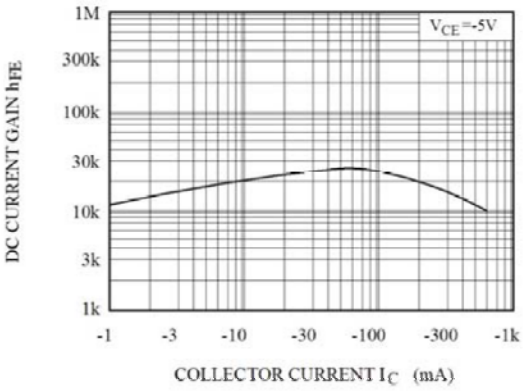
Absolute Maximum Ratings (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-30	V
Collector Emitter Voltage	V_{CEO}	-30	V
Emitter Base Voltage	V_{EBO}	-10	V
Collector Current	I_C	-500	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	- 55 to + 150	°C

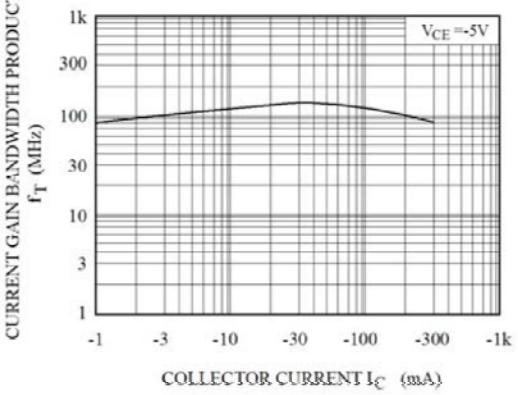
Characteristics at Ta = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	MMBTA63	h_{FE}	5000	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	MMBTA64	h_{FE}	10000	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA	MMBTA63	h_{FE}	10000	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA	MMBTA64	h_{FE}	20000	-	-
Collector Cutoff Current at $-V_{CB}$ = 30 V		I_{CBO}	-	-100	nA
Emitter Cutoff Current at $-V_{EB}$ = 10 V		I_{EBO}	-	-100	nA
Collector Emitter Breakdown Voltage at $-I_C$ = 100 µA		$V_{(BR)CEO}$	-30	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 0.1 mA		$V_{CE(sat)}$	-	-1.5	V
Base Emitter On Voltage at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA		$V_{BE(on)}$	-	-2	V
Transition Frequency at $-V_{CE}$ = 5 V, I_E = 10 mA		f_T	125	-	MHz

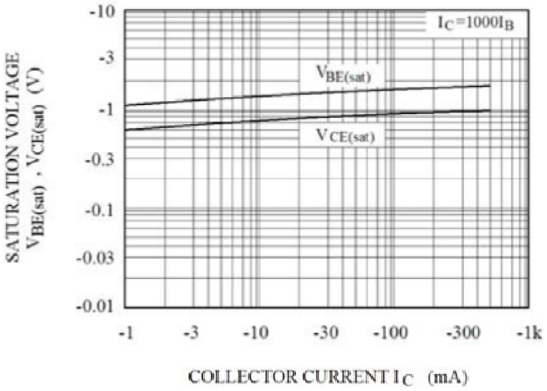
h_{FE} - I_C



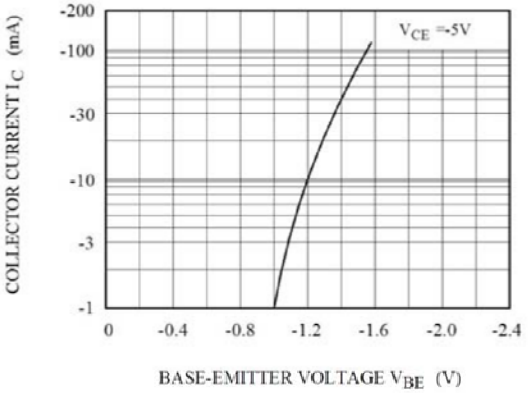
f_T - I_C



$V_{BE(sat)}$, $V_{CE(sat)}$ - I_C



I_C - V_{BE}

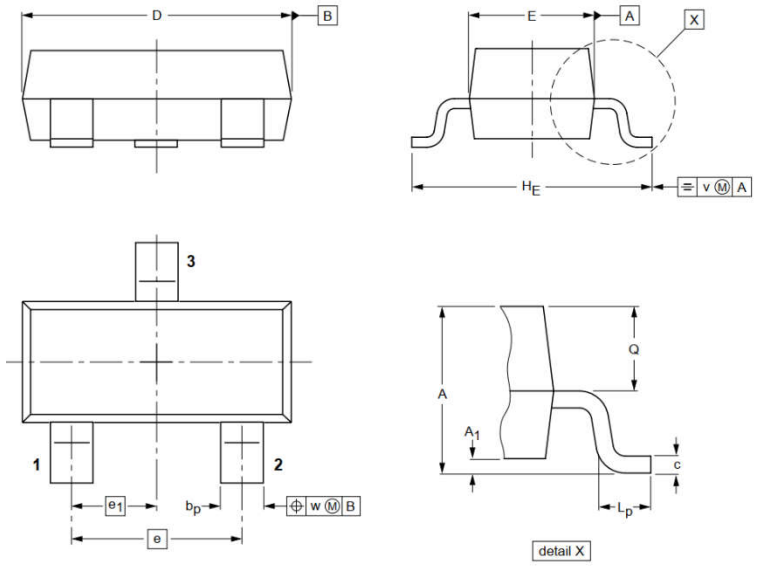


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

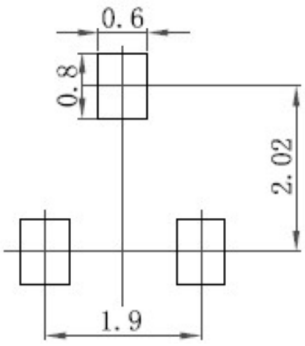
Package Dimensions

SOT-23



Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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