



Micro Commercial Components



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MMBT5343-O
MMBT5343-Y
MMBT5343-G
MMBT5343-L

**NPN Silicon
Transistors**

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Low Collector Saturation Voltage: $V_{CE(sat)}=0.25V(\text{Max.})$
- Low Output Capacitance: $C_{ob}=2.0pF(\text{Typ.})$
- Marking : 5343
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	50	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current	150	mA
P_C	Collector power dissipation	200	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

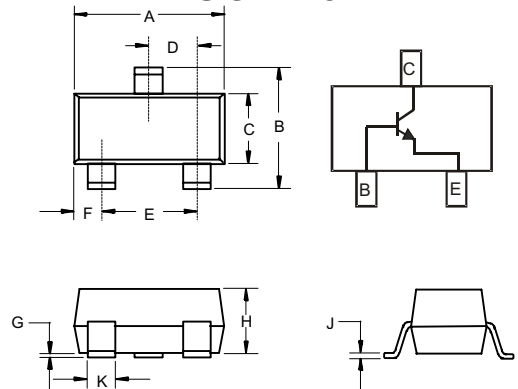
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=100\mu\text{Adc}$, $I_B=0$)	60	---	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=10\text{mAdc}$, $I_B=0$)	50	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=10\mu\text{Adc}$, $I_C=0$)	5.0	---	---	Vdc
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=60\text{Vdc}$, $I_E=0$)	---	---	0.1	μAdc
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=5.0\text{Vdc}$, $I_C=0$)	---	---	0.1	μAdc

ON CHARACTERISTICS

h_{FE}	Forward Current Transfer ratio* ($I_C=2.0\text{Adc}$, $V_{CE}=6.0\text{Vdc}$)	70	---	700	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=100\text{mAdc}$, $I_B=10\text{mAdc}$)	---	---	0.25	Vdc
f_T	Transition Frequency ($V_{CE}=10\text{Vdc}$, $I_C=1.0\text{mAdc}$)	80	---	---	MHz
C_{ob}	Collector Output Capacitance ($V_{CB}=10\text{Vdc}$, $I_E=0$, $f=1.0\text{MHz}$)	---	2.0	3.5	pF
NF	Noise Figure ($V_{CE}=6.0\text{Vdc}$, $I_C=0.1\text{mAdc}$, $f=1.0\text{KHz}$, $R_g=10\text{K}\Omega$)	---	---	10	dB

* h_{FE} rank / O: 70-140, Y:120-240, G:200-400, L:300-700

SOT-23



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

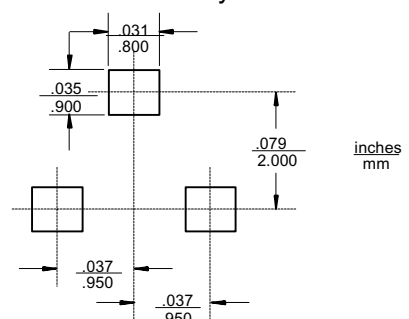


Fig. 1 $P_C - T_a$

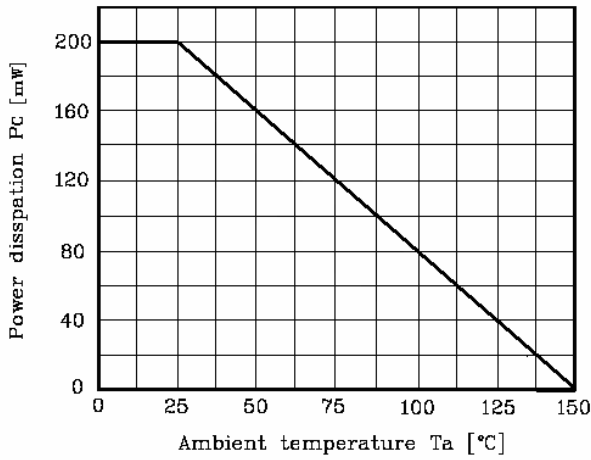


Fig. 2 $I_C - V_{BE}$

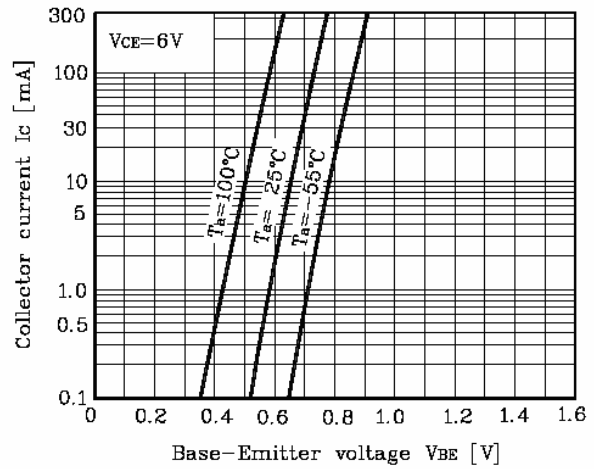


Fig. 3 $I_C - V_{CE}$

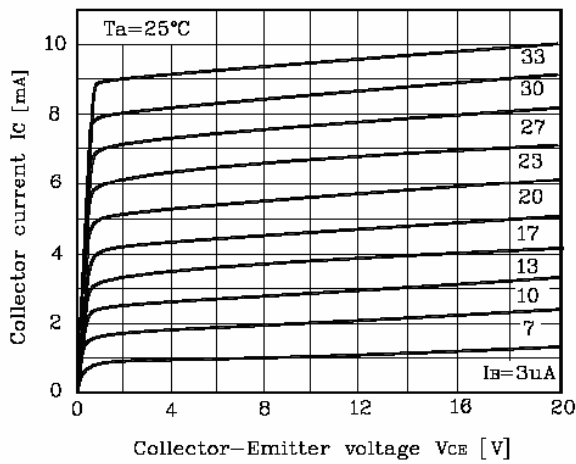


Fig. 4 $h_{FE} - I_C$

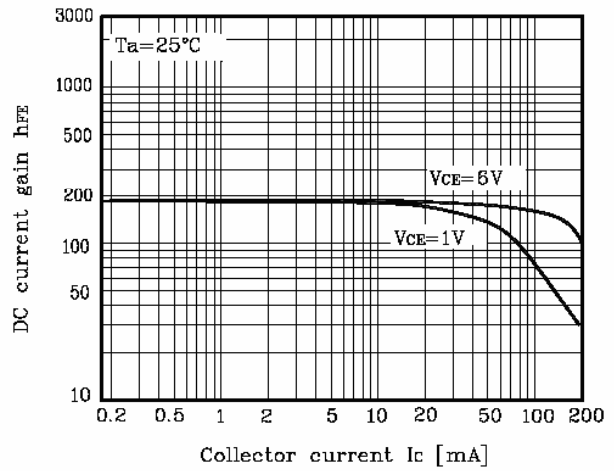
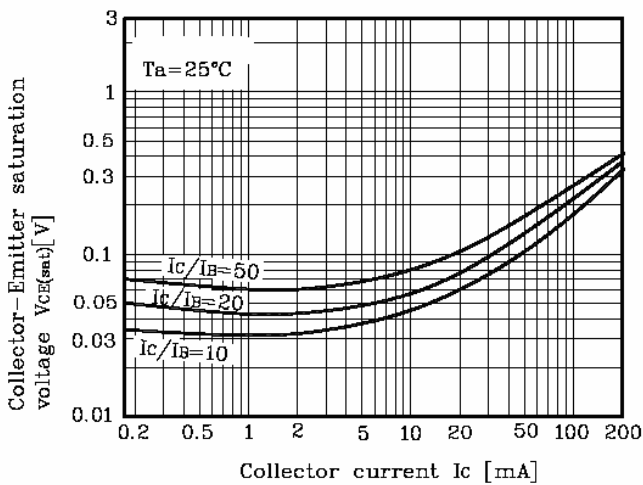


Fig. 5 $V_{CE(sat)} - I_C$





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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