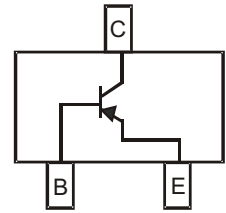
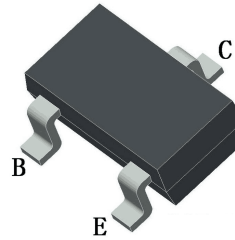


Features

- High current surface mount PNP silicon
- Switching transistor for Load management
- In portable applications

SOT-23



Marking

- 589

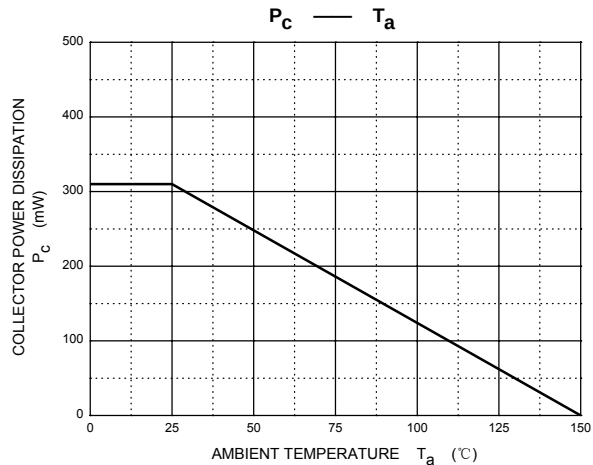
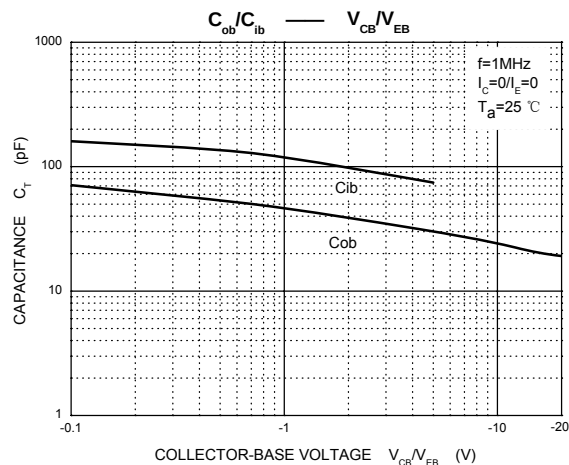
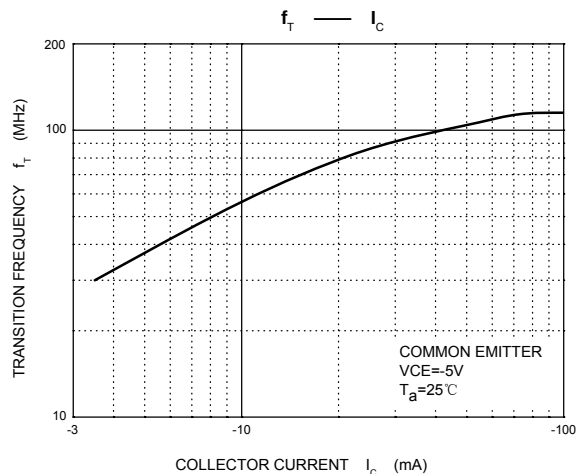
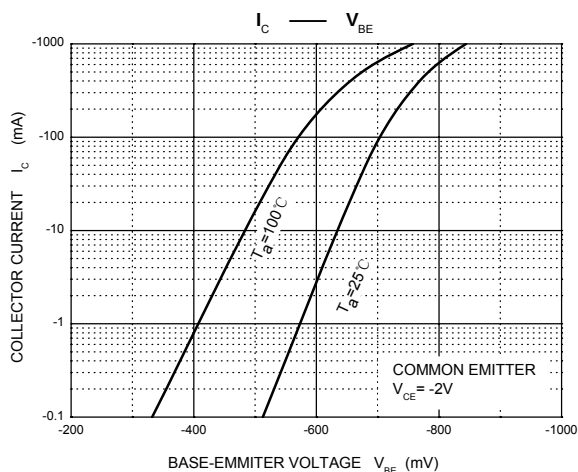
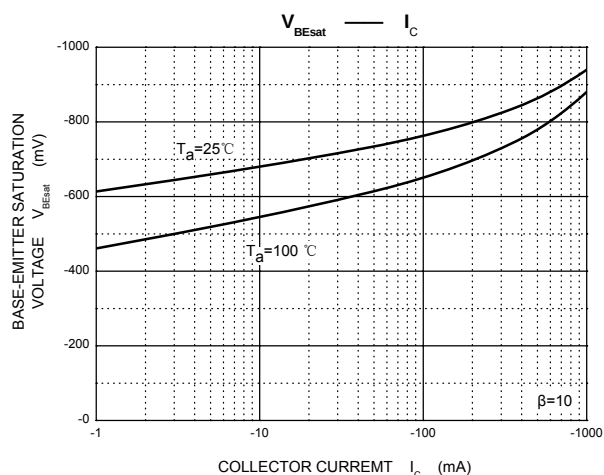
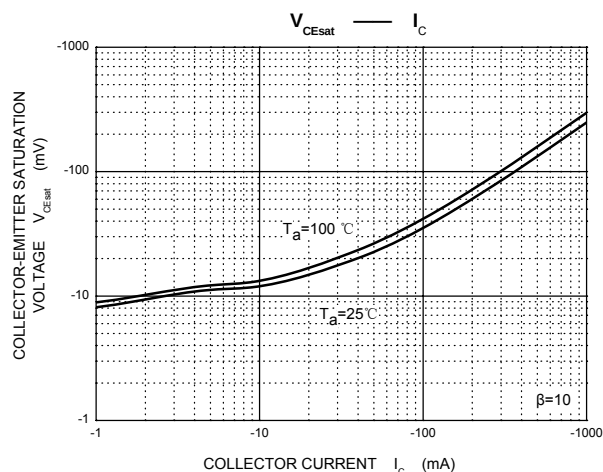
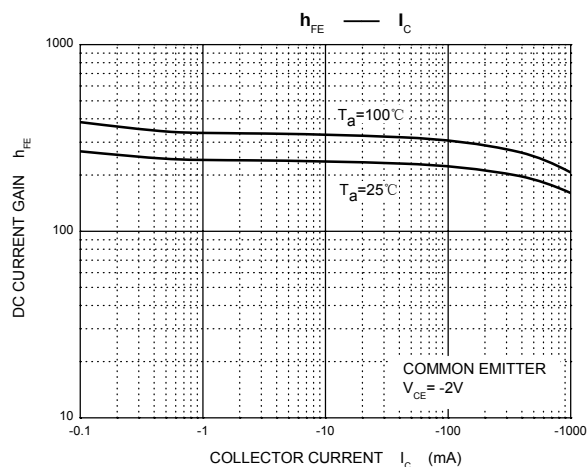
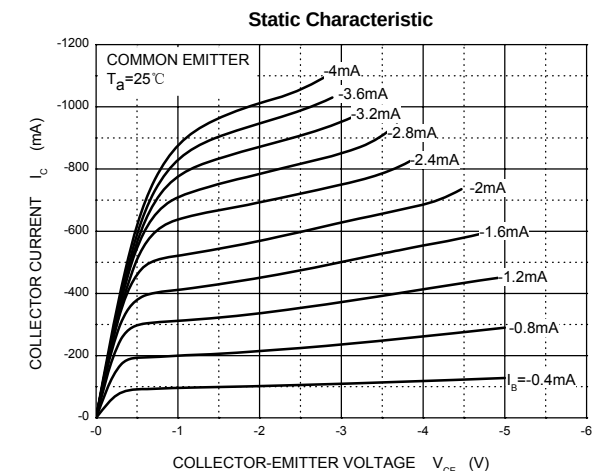
Limiting Values (Absolute Maximum Rating)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1	A
P_C	Collector Power Dissipation	310	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	403	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

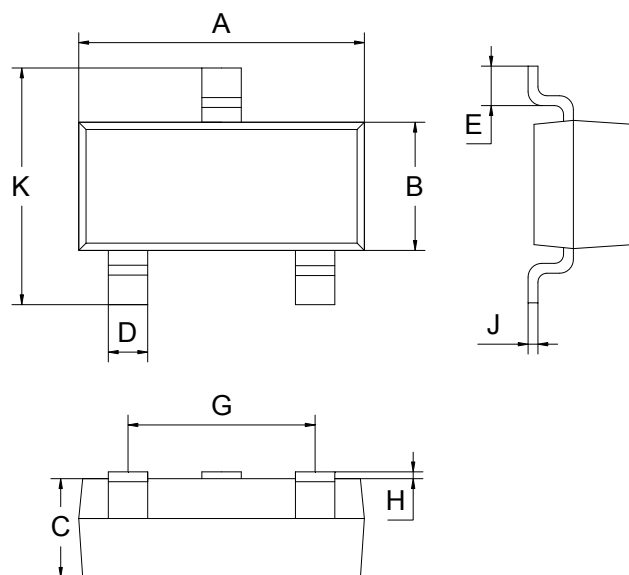
Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -30V, I_E = 0$			-0.1	μA
Collector-emitter cut-off current	I_{CES}	$V_{CE} = -30V$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-0.1	μA
DC current gain	h_{FE1}	$V_{CE} = -2V, I_C = -1mA$	100			
	h_{FE2}	$V_{CE} = -2V, I_C = -500mA$	100		300	
	h_{FE3}	$V_{CE} = -2V, I_C = -1A$	80			
	h_{FE4}	$V_{CE} = -2V, I_C = -2A$	40			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -500mA, I_B = -50mA$			-0.25	V
	$V_{CE(sat)2}$	$I_C = -1A, I_B = -100mA$			-0.3	V
	$V_{CE(sat)3}$	$I_C = -2A, I_B = -200mA$			-0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1A, I_B = -100mA$			-1.2	V
Base-emitter Turn-on voltage	$V_{BE(on)}$	$V_{CE} = -2V, I_C = -1A$			-1.1	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -100mA, f = 100MHz$	100			MHz
Collector Output Capacitance	C_{ob}	$f = 1MHz$			15	pF

Typical Characteristics

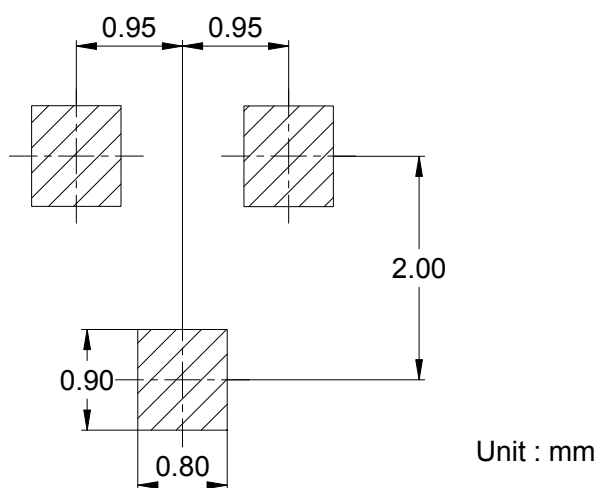


SOT-23 Package Outline Dimensions



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOT-23 Suggested Pad Layout



Package Information

TYPE	REEL	Reel Size	Box	Carton
MMBT589	3000 pcs	7 Inch	45,000 pcs	180,000 pcs