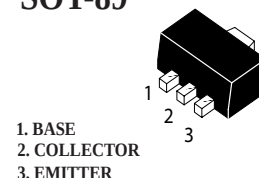


MXTA42

NPN Plastic-Encapsulate Transistor

(Pb) Lead(Pb)-Free

SOT-89



Maximum Ratings (T_A=25°C unless otherwise noted)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	300	V _{dc}
Collector-Base Voltage	V _{CBO}	300	V _{dc}
Emitter-Base Voltage	V _{EBO}	5.0	V _{dc}
Collector Current-Continuous	I _C	500	mAdc

Thermal Characteristics

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1.)T _A =25°C Derate above 25°C	P _D	500 4.0	mW mW/°C
Thermal Resistance, Junction to Ambient (1)	R _{θJA}	250	°C/W
Junction and Storage, Temperature Range	T _J ,T _{stg}	-55 to +150	°C

Device Marking

MXTA42=A42

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I _C = 1.0 mAdc, I _B =0)	V _{(BR)CEO}	300	-	V _{dc}
Collector-Base Breakdown Voltage (I _C = 100 μAdc, I _E =0)	V _{(BR)CBO}	300	-	V _{dc}
Emitter-Base Breakdown Voltage (I _E = 100 μAdc, I _C =0)	V _{(BR)EBO}	5.0	-	V _{dc}
Collector Cutoff Current (V _{CB} = 200 Vdc, I _E =0)	I _{CBO}	-	0.25	uAdc
Emitter Cutoff Current (V _{EB} = 5.0 Vdc, I _C =0)	I _{EBO}	-	0.1	uAdc

1.FR-5=1.0 x 0.75 x 0.062 in.

MXTA42**ELECTRICAL CHARACTERISTICS** ($T_A=25^{\circ}\text{C}$ unless otherwise noted) (Continued)

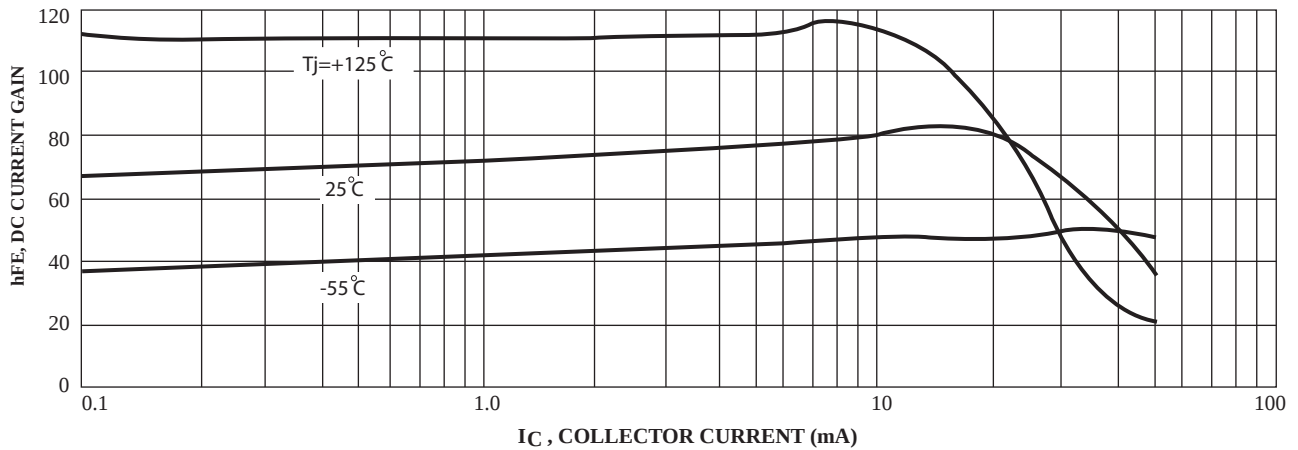
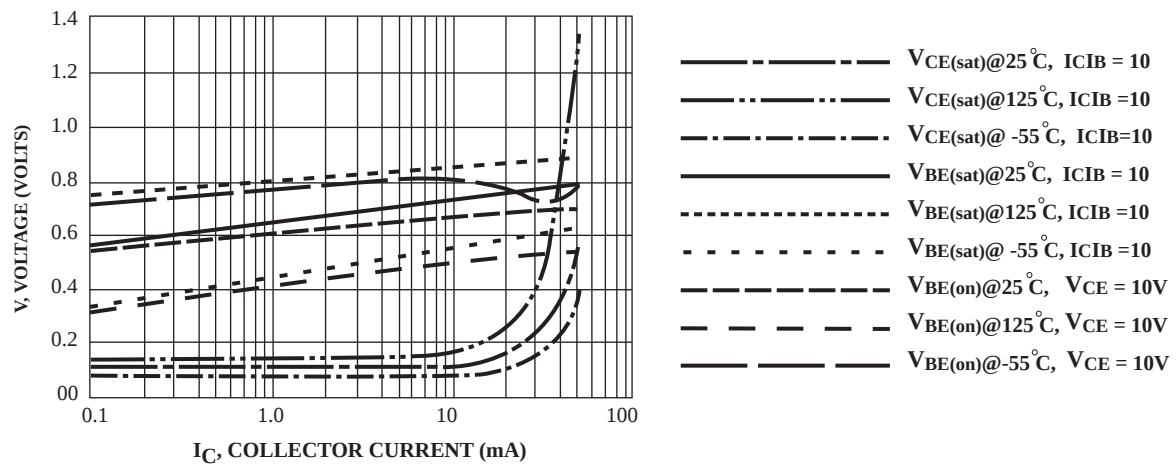
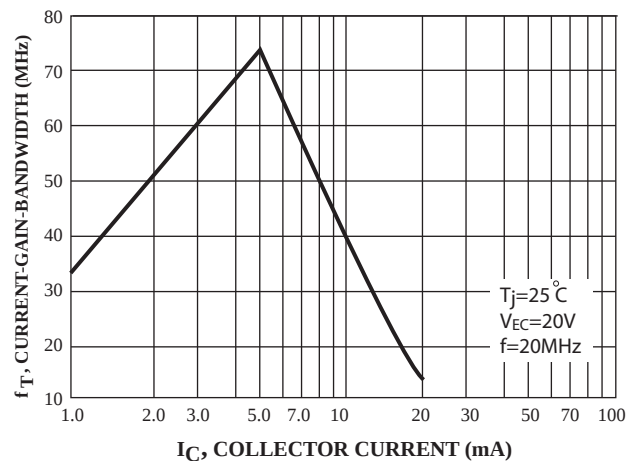
Characteristics	Symbol	Min	Max	Unit
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ON CHARACTERISTICS

DC Current Gain ($I_C = 1 \text{ mA}$, $V_{CE} = 10 \text{ V}$) ($I_C = 10 \text{ mA}$, $V_{CE} = 10 \text{ V}$) ($I_C = 30 \text{ mA}$, $V_{CE} = 10 \text{ V}$)	$h_{FE(1)}$ $h_{FE(2)}$ $h_{FE(3)}$	60 80 75	- 250 -	-
Collector-Emitter Saturation Voltage ($I_C = 20 \text{ mA}$, $I_B = 2 \text{ mA}$)	$V_{CE(sat)}$	-	0.2	Vdc
Base-Emitter Saturation Voltage ($I_C = 20 \text{ mA}$, $I_B = 2 \text{ mA}$)	$V_{BE(sat)}$	-	0.9	Vdc
Transition Frequency ($V_{CE} = 20 \text{ V}$, $I_C = 10 \text{ mA}$, $f = 30 \text{ MHz}$)	f_T	50	-	MHz

Classification of $h_{FE(2)}$

Rank	A	B1	B2	C
Range	80-100	100-150	150-200	200-250

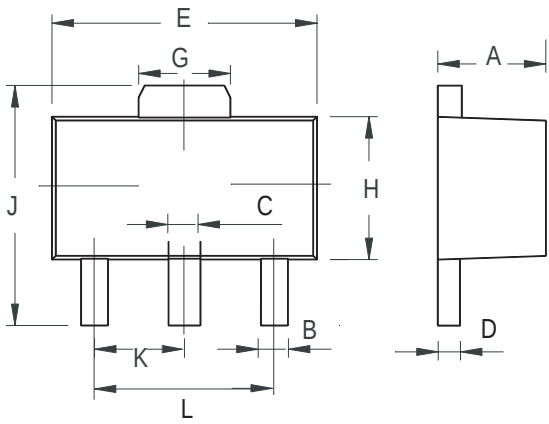
MXTA42**WEITRON****Typical Characteristics****FIG. 1 DC Current Gain****FIG. 2 "On" Voltages****FIG. 3 Current-Gain-Bandwidth**

MXTA42



SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	Min	Max
A	1.400	1.600
B	0.320	0.520
C	0.360	0.560
D	0.350	0.440
E	4.400	4.600
G	1.400	1.800
H	2.300	2.600
J	3.940	4.250
K	1.500TYP	
L	2.900	3.100