WEJ®

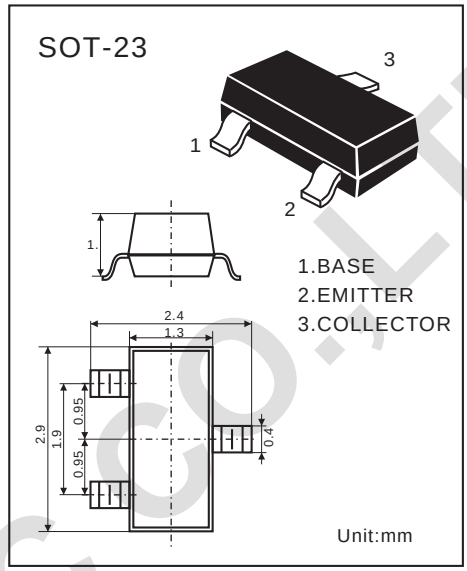
RoHS

MMBTA42LT1

NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTGE TRANDIDTOR

- Complement to MMBTA92LT1
- High Collector-Emitter Voltage:Vcbo=300V
- Collector current:Ic=500mA
- Collector Dissipation:Pc=225mW(Ta=25°C)



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	Ic	500	mA
Collector Dissipation Ta=25°C*	P_D	225	mW
Junction Temperature	T_j	150	°C
Storage Temperature	Tstg	-55~150	°C

Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Collector-Base Breakdown Voltage	BV_{CBO}	300			V	I_C=100μA I_E=0
Collector-Emitter Breakdown Voltage#	BV_{CEO}	300			V	I_C=1mA I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	6			V	I_E=100μA I_C=0
Collector Cutoff Current	I_{CBO}			100	nA	V_{CB}=200V, V_e=0
Collector Cutoff Current	I_{EBO}			100	nA	V_{EB}=6V, I_C=0
DC Current Gain	H_{FE}	40		250		V_{CE}=10V, I_C=10mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	I_C=20mA, I_B=2mA
Base-Emitter On Voltage	$V_{BE(sat)}$			0.9	V	I_C=20mA, I_B=2mA
Collector-Base Capacitance	C_{ob}			3	PF	V_{CB}=10V, I_E=0 f=1MHz
Current Gain-Bandwidth Product	f_T	50			MHz	V_{CE}=20V I_C=10mA f=100MHz

*Total Device Dissipation:FR=1X0.75X0.062 in Board Derate 25°C

#Pulse Test: Pulse Width≤300uS Duty cycle≤2%

DEVICE MARKING:

MMBTA42LT1=1D

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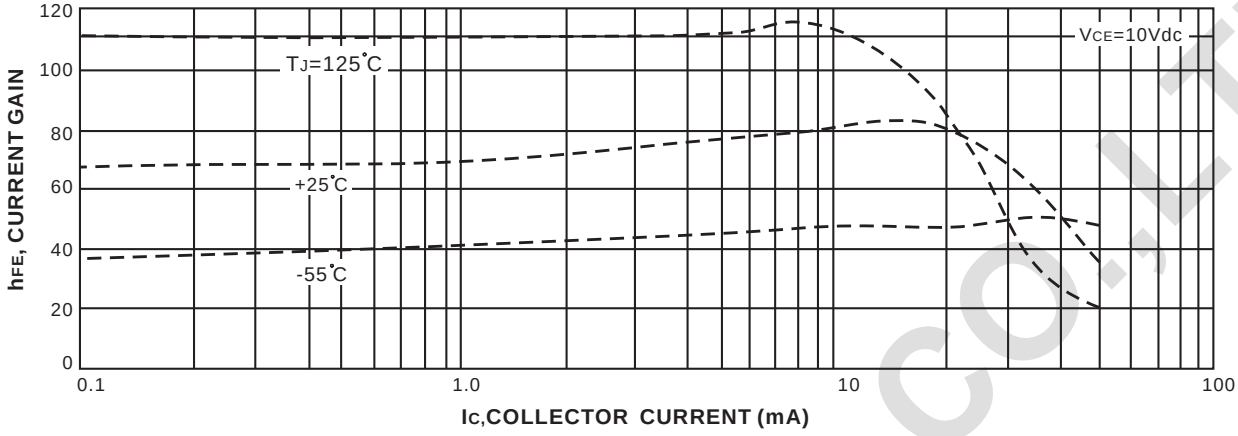
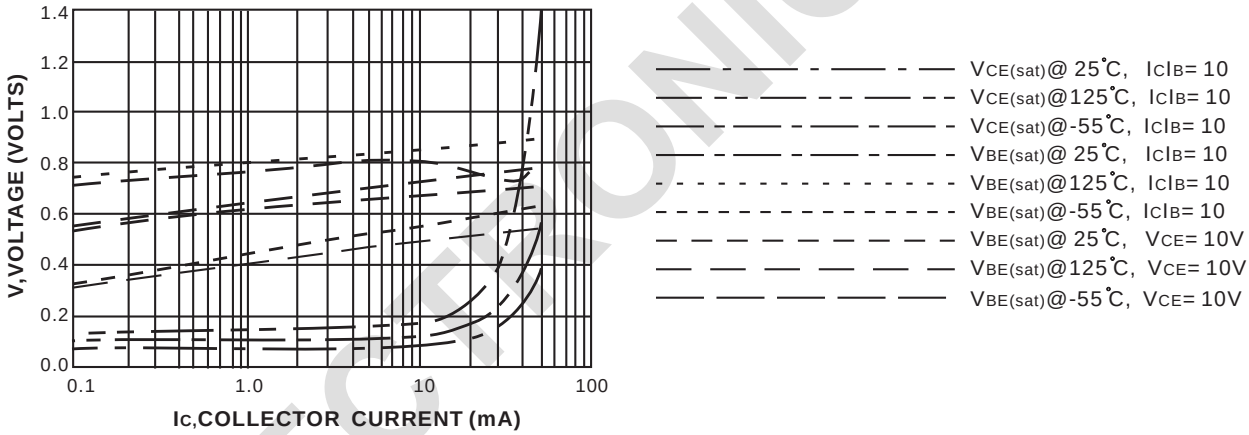
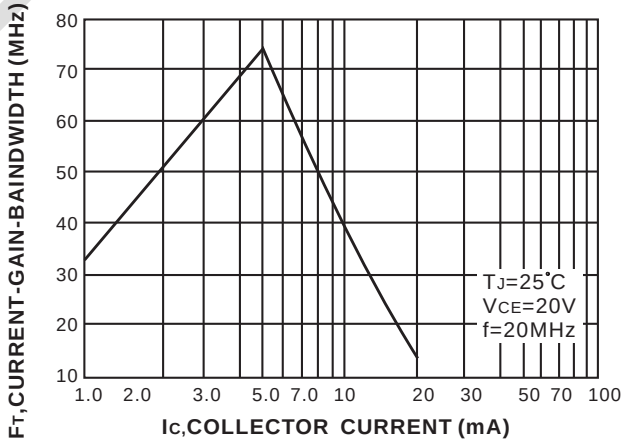
Typical Characteristics



DC Current Gain



"On" Voltages



Current-Gain-- Bandwidth

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