



MMBTA42

NPN SILICON TRANSISTOR

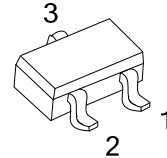
HIGH VOLTAGE TRANSISTOR

DESCRIPTION

The UTC **MMBTA42** are high voltage transistors, designed for telephone switch and high voltage switch.

FEATURES

- * Collector-Emitter voltage: $V_{CEO}=300V$
- * High current gain
- * Collector Dissipation: $P_{C(max)}=350mW$



SOT-23

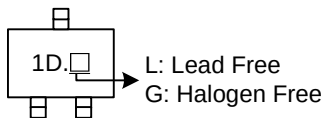
Lead-free: MMBTA42L
Halogen-free: MMBTA42G

ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
MMBTA42-AE3-R	MMBTA42L-AE3-R	MMBTA42G-AE3-R	SOT-23	E	B	C	Tape Reel

MMBTA42L-AE3-R (1) Packing Type (2) Package Type (3) Lead Plating		(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free, L: Lead Free, Blank: Pb/Sn
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Dissipation (Ta=25°C)	P_C	350	mW
Collector Current	I_C	500	mA
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

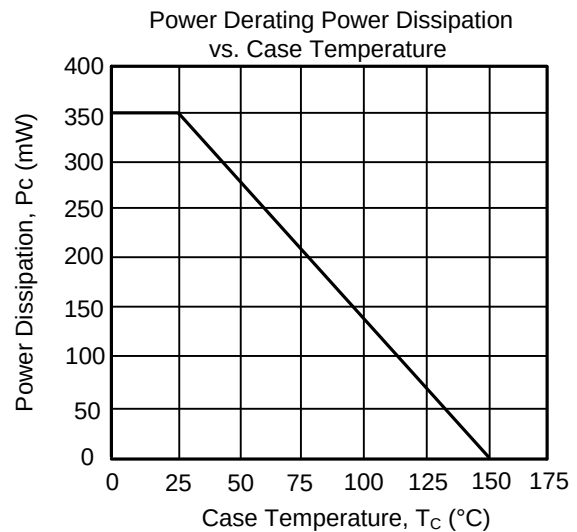
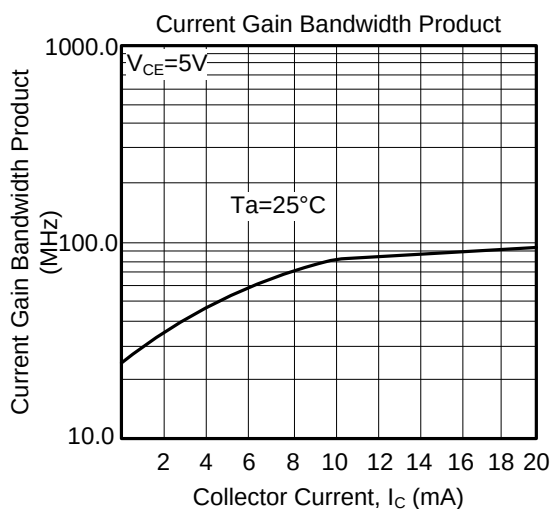
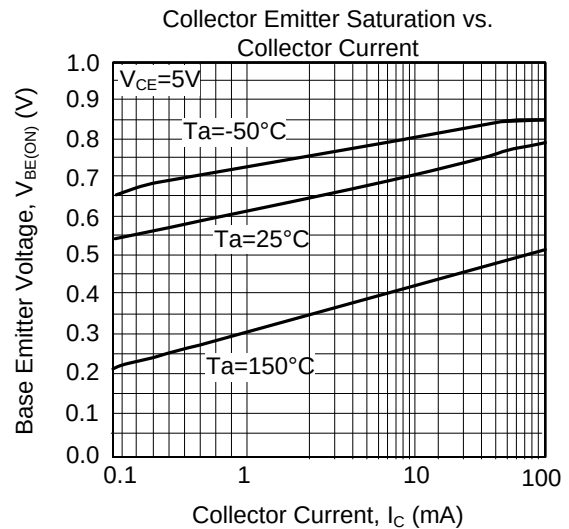
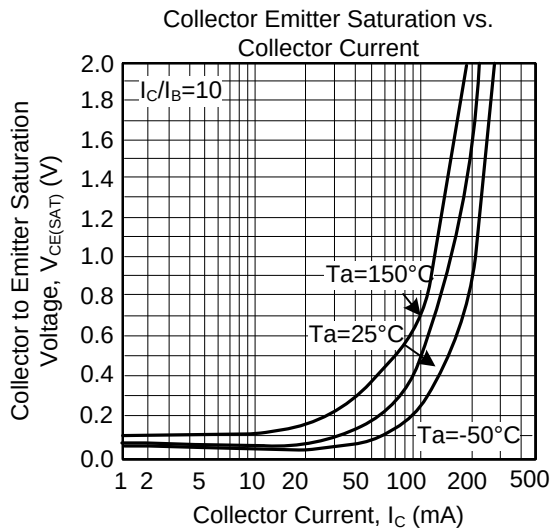
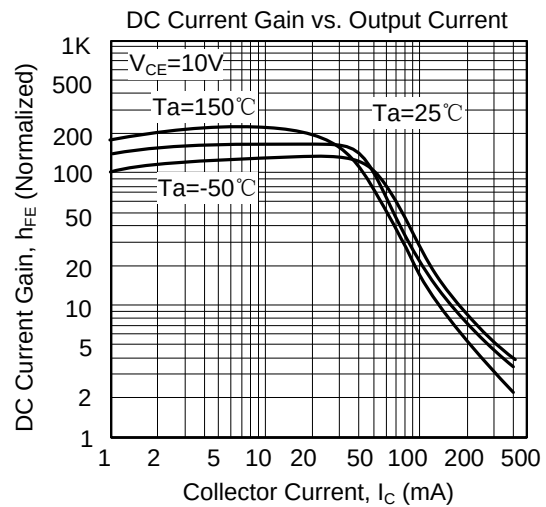
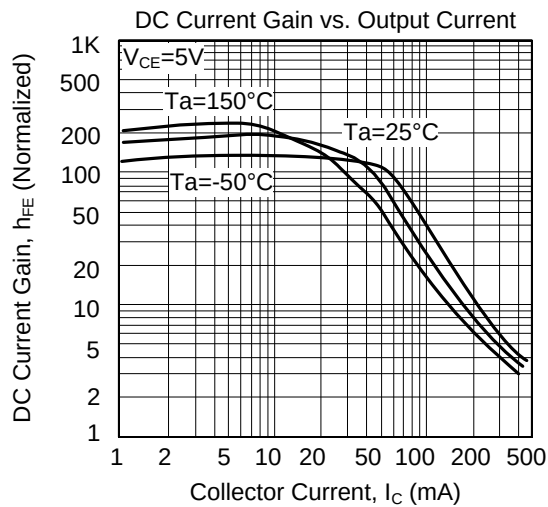
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied

■ ELECTRICAL CHARACTERISTICS (T_J=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	300			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, I_B=0$	300			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	6			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=20mA, I_B=2mA$			0.2	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=20mA, I_B=2mA$			0.90	V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=200V, I_E=0$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=6V, I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=10V, I_C=1mA$	80			
		$V_{CE}=10V, I_C=10mA$	80		300	
		$V_{CE}=10V, I_C=30mA$	80			
Current Gain Bandwidth Product	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	50			MHz
Collector Base Capacitance	C_{cb}	$V_{CB}=20V, I_E=0, f=1MHz$			3	pF

TYPICAL CHARACTERISTICS



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