



# MMBTA42

## NPN EPITAXIAL SILICON TRANSISTOR

### HIGH VOLTAGE TRANSISTOR

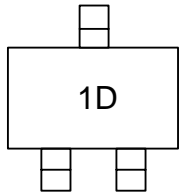
#### DESCRIPTION

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

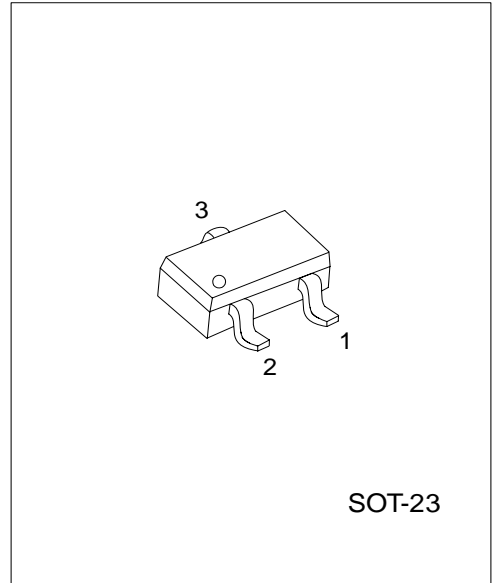
#### FEATURES

- \*Collector-Emitter voltage:  $V_{CE0}=300V$
- \*High current gain
- \*Power Dissipation:  $P_{D(max)}=350mW$

#### MARKING



[www.DataSheet4U.com](http://www.DataSheet4U.com)



\* Pb-free plating product number: MMBTA42L

#### PIN CONFIGURATION

PIN NO.	PIN NAME
1	Emitter
2	Base
3	Collector

#### ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
MMBTA42-AE3-R	MMBTA42L-AE3-R	SOT-23	Tape Reel

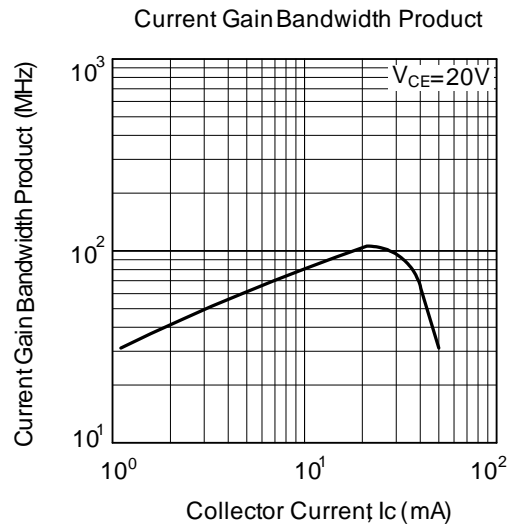
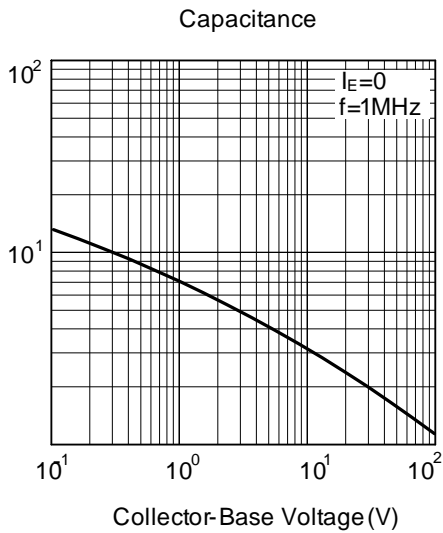
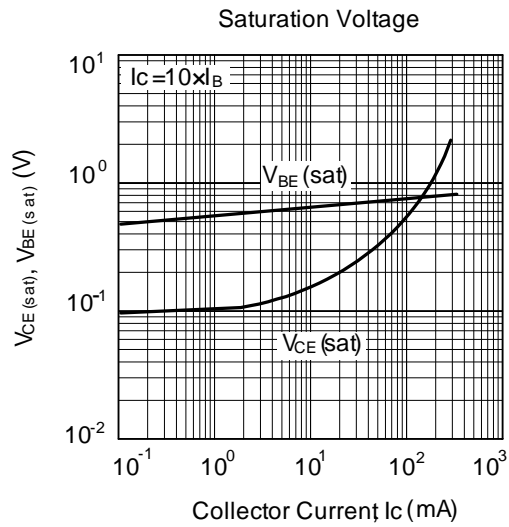
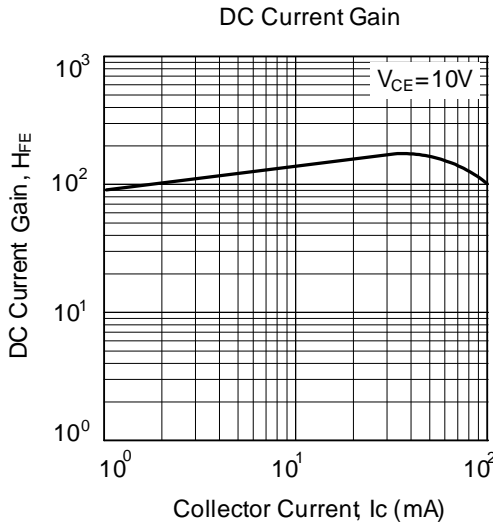
■ ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

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 Current	$I_c$	500	mA
Power Dissipation	$P_D$	350	mW
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~ +150	$^\circ\text{C}$

■ ELECTRICAL CHARACTERISTICS ( $T_J=25^\circ\text{C}$ , unless otherwise specified)

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

■ TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.