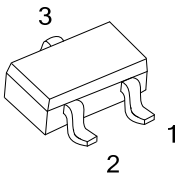
MMBTA13

Preliminary **NPN EPITAXIAL SILICON TRANSISTOR**

DARLINGTON TRANSISTOR



SOT-23

■ DESCRIPTION

The UTC **MMBTA13** is a Darlington transistor.

■ FEATURES

* Collector-Emitter Voltage: V_{CES} = 30V
* Collector Dissipation: $P_{C(MAS)}$ = 350 mW

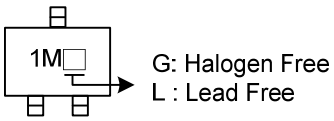
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
MMBTA13L-AE3-R	MMBTA13G-AE3-R	SOT-23	Tape Real

MMBTA13L-AE3-R
(1)Packing Type
(2)Package Type
(3)Lead Free

(1) R: Tape Reel
(2) AE3: SOT-23
(3) G: Halogen Free, L: Lead Free

■ MARKING



G: Halogen Free
L : Lead Free

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CES}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Dissipation	V_{EBO}	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_A =25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CES}	I_C=100μA, I_B=0	30			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=30V, I_E=0			100	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=10V, I_C=0			100	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=100mA	10000			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=100mA, I_B=0.1mA			1.5	V
Base-Emitter on Voltage	$V_{BE(ON)}$	V_{CE}=5V, I_C=100mA			2.0	V
Current Gain Bandwidth Product	f_T	V_{CE}=5V, I_C=10mA, f=100MHz	125			MHz

Note: Pulse test: Pulse Width<300μs, Duty Cycle=2%