

UTC MMBTA13 NPN EPITAXIAL SILICON TRANSISTOR

DARLINGTON TRANSISTOR

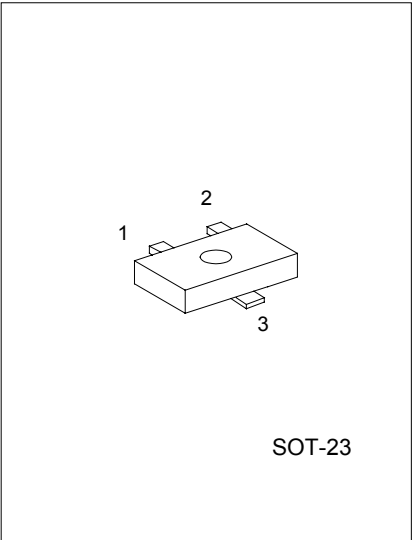
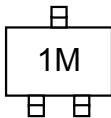
DESCRIPTION

The UTC MMBTA13 is a Darlington transistor.

FEATURES

- *Collector-Emitter Voltage: $V_{CES} = 30V$
- *Collector Dissipation: $P_c (mas) = 350\text{ mW}$

MARKING



SOT-23

1: EMITTER 2: BASE 3: COLLECTOR

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

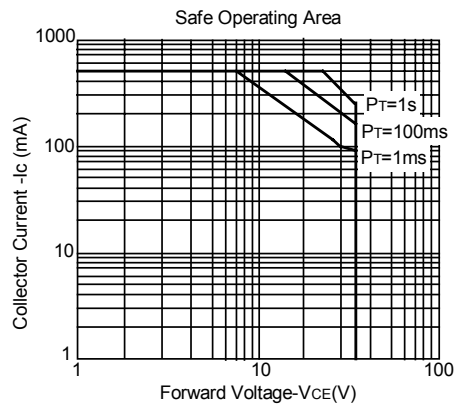
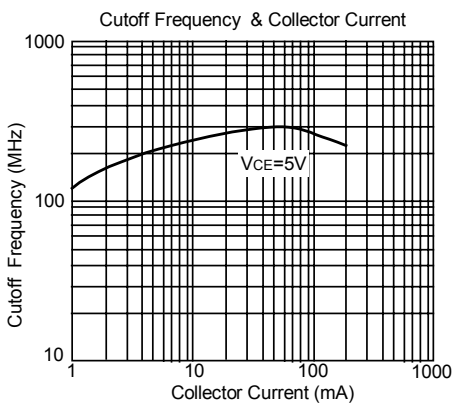
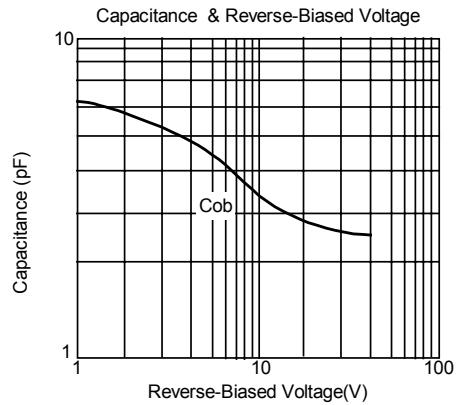
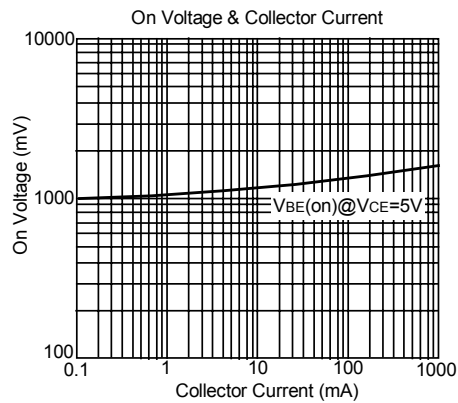
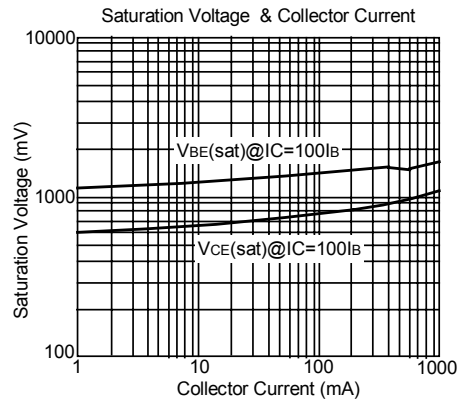
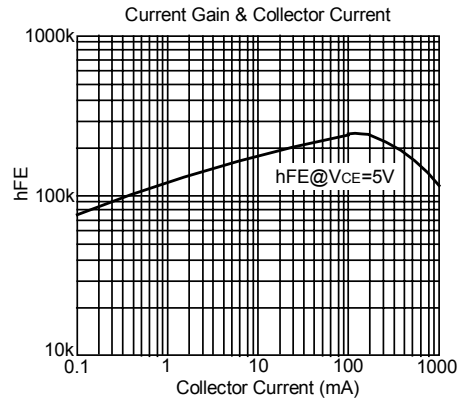
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CES}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Dissipation	P_c	350	mW
Collector Current	I_c	500	mA
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CES}	$I_c=100\mu\text{A}, I_B=0$	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}	$V_{CE}=5V, I_c=100\text{mA}$	10000		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c=100\text{mA}, I_B=0.1\text{mA}$		1.5	V
Base-Emitter on Voltage	$V_{BE(on)}$	$V_{CE}=5V, I_c=100\text{mA}$		2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5V, I_c=10\text{mA}, f=100\text{MHz}$	125		MHz

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

TYPICAL CHARACTERISTICS



UTC MMBTA13

NPN EPITAXIAL SILICON TRANSISTOR

