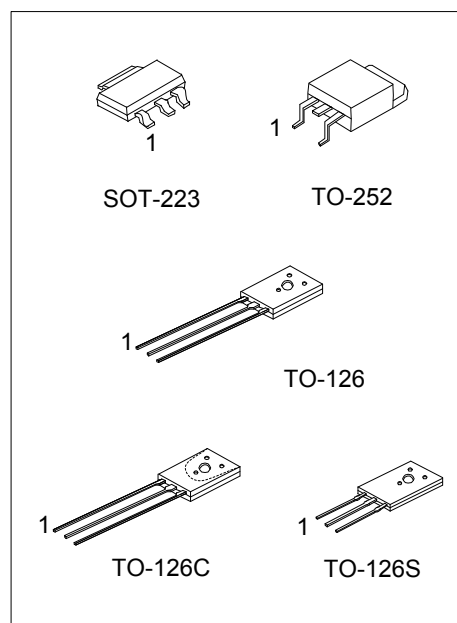


**2SD2136****NPN SILICON TRANSISTOR****POWER TRANSISTOR****DESCRIPTION**

The UTC **2SD2136** is designed for power application.

FEATURES

- * High forward current transfer ratio h_{FE} which has satisfactory linearity.
- * Low collector to emitter saturation voltage $V_{CE(SAT)}$.
- * Allowing supply with the radial taping.

**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD2136L-x-AA3-R	2SD2136G-x-AA3-R	SOT-223	B	C	E	Tape Reel
2SD2136L-x-TN3-R	2SD2136G-x-TN3-R	TO-252	B	C	E	Tape Reel
2SD2136L-x-T60-K	2SD2136G-x-T60-K	TO-126	B	C	E	Bulk
2SD2136L-x-T6C-K	2SD2136G-x-T6C-K	TO-126C	B	C	E	Bulk
2SD2136L-x-T6S-K	2SD2136G-x-T6S-K	TO-126S	B	C	E	Bulk

Note: Pin assignment: B: Base C: Collector E: Emitter

2SD2136G-x-AA3-R (1) Packing Type (2) Package Type (3) Rank (4) Green Package	(1) R: Tape Reel, K: Bulk (2) AA3: SOT-223, TN3: TO-252, T60: TO-126, T6C: TO-126C, T6S: TO-126S (3) x: Refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free
---	--

2SD2136

NPN SILICON TRANSISTOR

■ MARKING

PACKAGE	MARKING
SOT-223	2SD2136□ □□□□ 1 L: Lead Free G: Halogen Free Date Code
TO-252	UTC 2SD2136□ □□□□□□ 1 Lot Code L: Lead Free G: Halogen Free Date Code
TO-126 TO-126C TO-126S	UTC □□□□ 2SD2136□ 1 Date Code L: Lead Free G: Halogen Free

■ **ABSOLUTE MAXIMUM RATINGS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Collector-Emitter Voltage		V_{CEO}	60	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current		I_C	3	A
Peak Collector Current		I_{CP}	5	A
Collector Dissipation	SOT-223	P_C	1	W
	TO-252		1.9	W
	TO-126/TO-126C		1.5	W
	TO-126S			
Junction Temperature		T_J	150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

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.

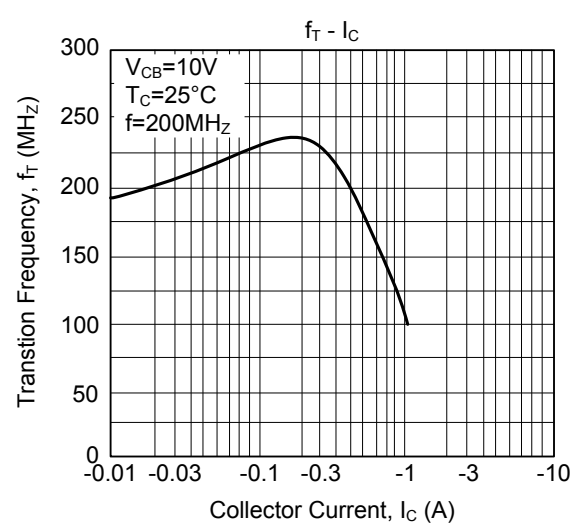
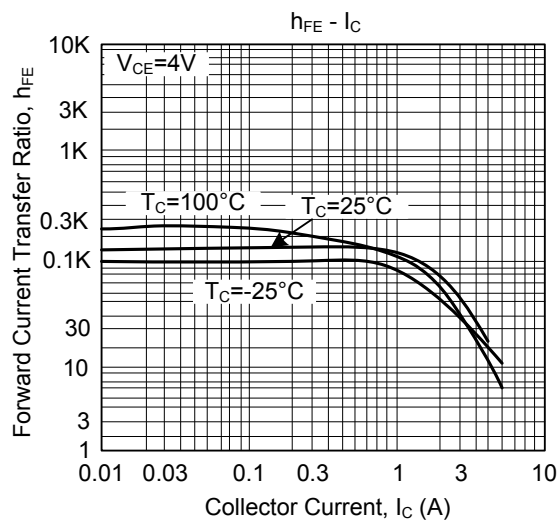
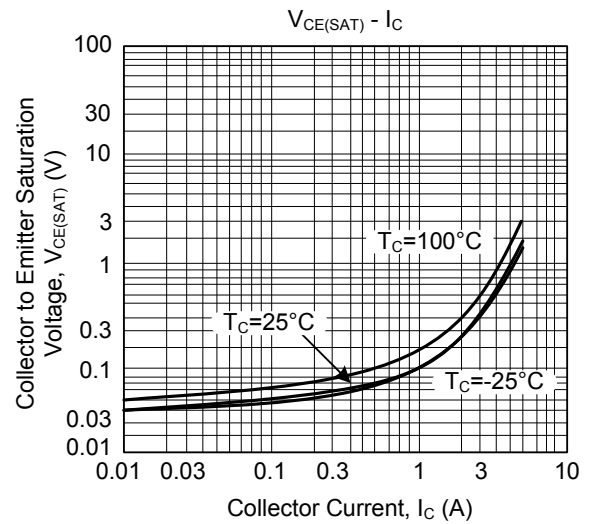
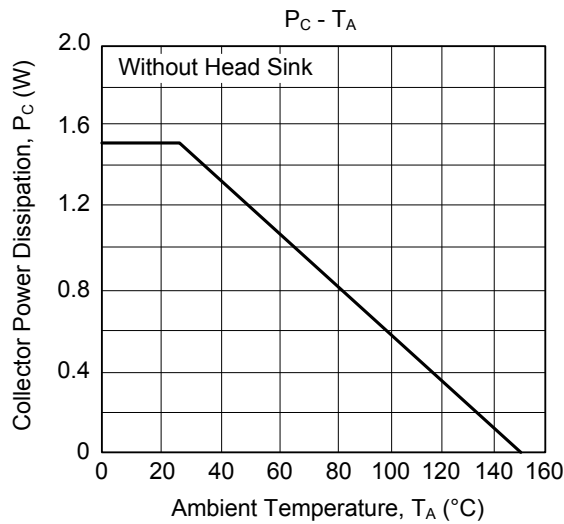
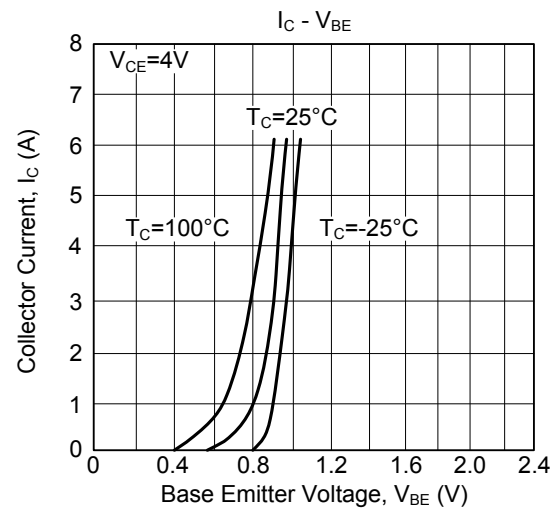
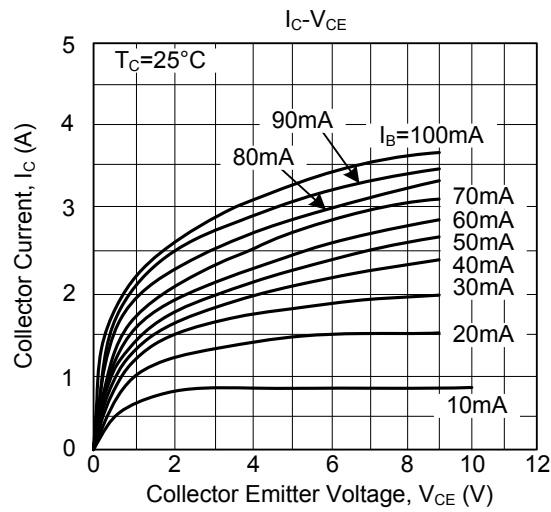
■ **ELECTRICAL CHARACTERISTICS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CEO}	$I_C=30\text{mA}$, $I_B=0$	60			V
Collect Cutoff Current	I_{CEO}	$V_{CE}=60\text{V}$, $I_B=0$			300	μA
Collect Cutoff Current	I_{CES}	$V_{CE}=60\text{V}$, $V_{BE}=0$			200	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=6\text{V}$, $I_C=0$			1	mA
DC Current Gain	h_{FE1}	$V_{CE}=4\text{V}$, $I_C=1\text{A}$	40		250	
	h_{FE2}	$V_{CE}=4\text{V}$, $I_C=3\text{A}$	10			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=3\text{A}$, $I_B=0.375\text{A}$			1.2	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=4\text{V}$, $I_C=3\text{A}$			1.8	V
Current Gain Bandwidth Product	f_T	$V_{CE}=15\text{V}$, $I_E=0.1\text{A}$, $f=200\text{MHz}$		220		MHz
Turn On Time	t_{ON}	$I_C=1\text{A}$, $I_{B1}=0.1\text{A}$, $I_{B2}=0.1\text{A}$		0.5		μS
Storage Time	t_S			2.5		μS
Fall Time	t_F			0.4		μS

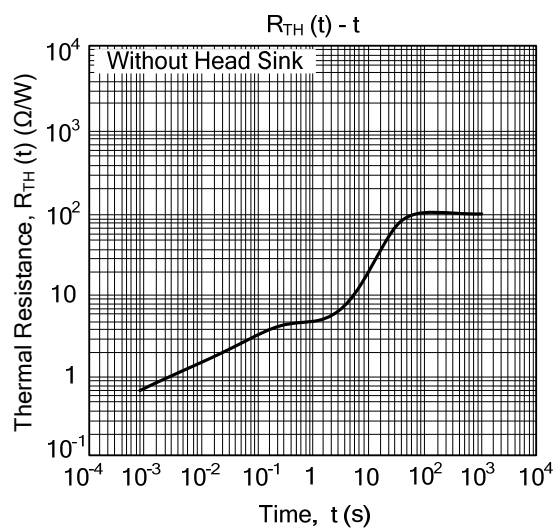
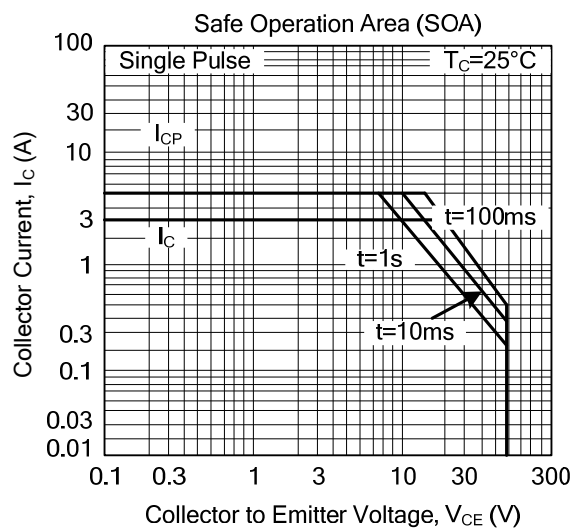
■ **CLASSIFICATION OF h_{FE1}**

RANK	P	Q	R
RANGE	40-90	70-150	120-250

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.