



2SD2136

NPN SILICON TRANSISTOR

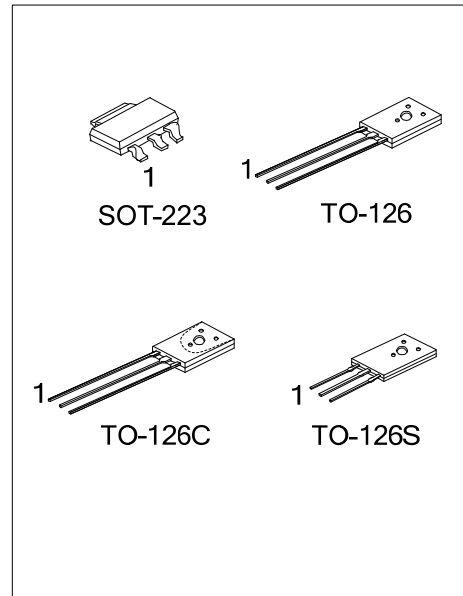
POWER TRANSISTOR

■ 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	
-	2SD2136G-x-AA3-R	SOT-223	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: E: Emitter B: Base C: Collector

<p>2SD2136G-x-AA3-R</p>	<p>(1) K: Bulk (2) AA3: SOT-223T60: TO-126, T6C: TO-126C T6S: TO-126S (3) x: Refer to Classification of h_{FE1} (4) L: Lead Free , G: Halogen Free</p>
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■ MARKING

SOT-223	TO-126 / TO-126C / TO-126S

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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-126/TO-126C		1.5	W
	TO-126S			
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.

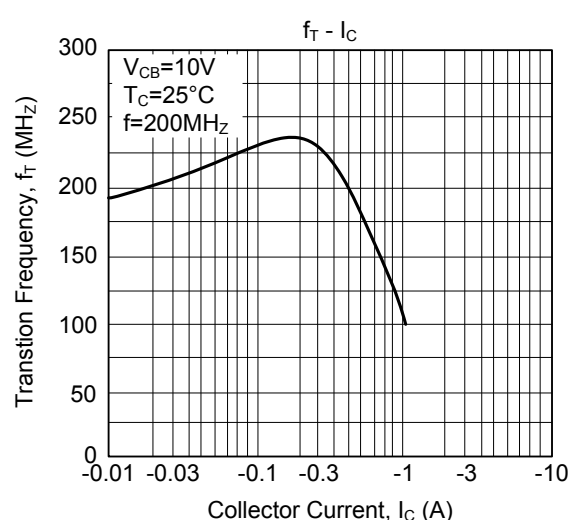
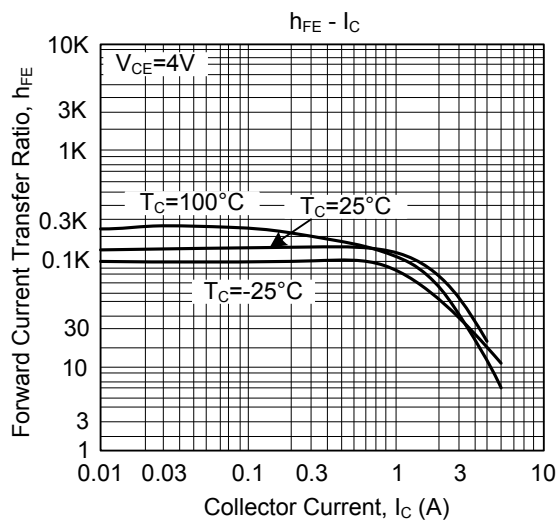
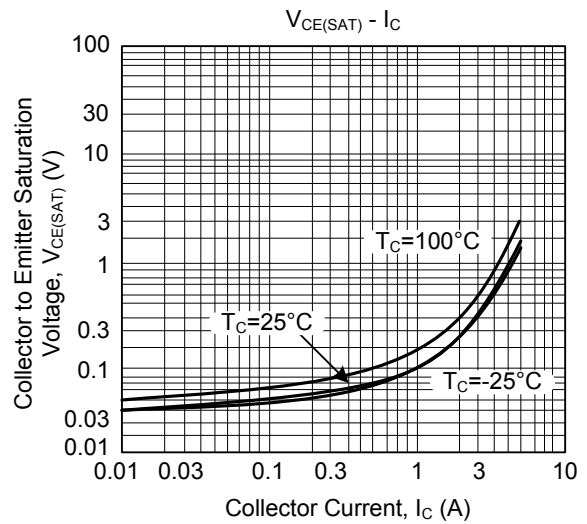
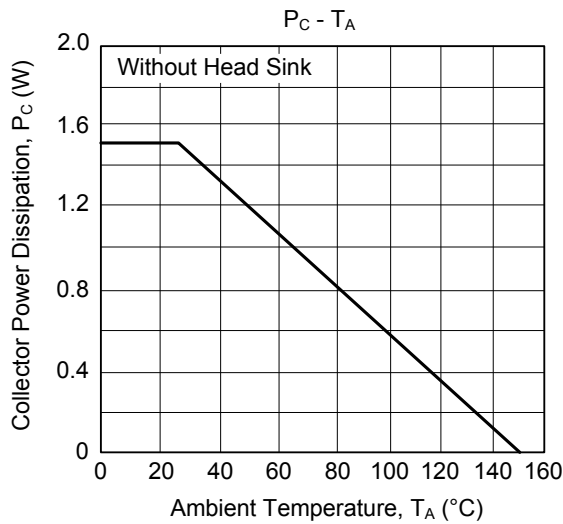
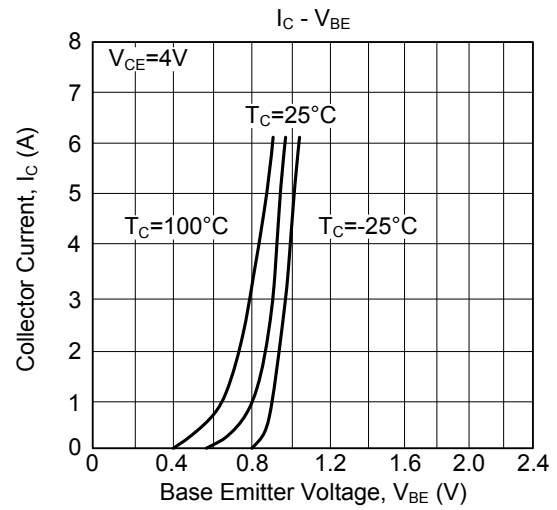
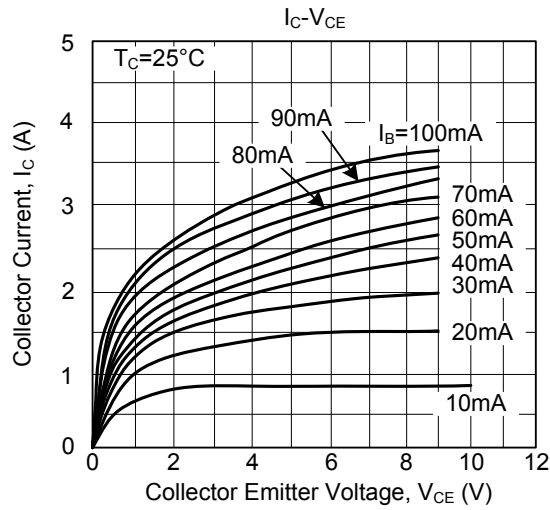
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CEO}	I _C =30mA, I _B =0	60			V
Collect Cutoff Current	I _{CEO}	V _{CE} =60V, I _B =0			300	μA
Collect Cutoff Current	I _{CES}	V _{CE} =60 V, V _{BE} =0			200	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =6 V, I _C =0			1	mA
DC Current Gain	h _{FE1}	V _{CE} =4V, I _C =1A	40		250	
	h _{FE2}	V _{CE} =4V, I _C =3A	10			
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =3A, I _B =0.375A			1.2	V
Base-Emitter Voltage	V _{BE}	V _{CE} =4V, I _C =3A			1.8	V
Current Gain Bandwidth Product	f _T	V _{CE} =15V, I _E =0.1A, f =200MHz		220		MHz
Turn On Time	t _{ON}	I _C = 1A, I _{B1} =0.1A, I _{B2} =0.1A		0.5		μS
Storage Time	t _S			2.5		μS
Fall Time	t _F			0.4		μS

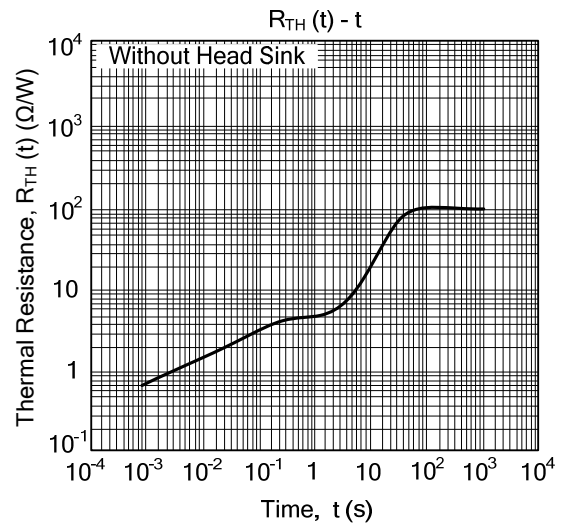
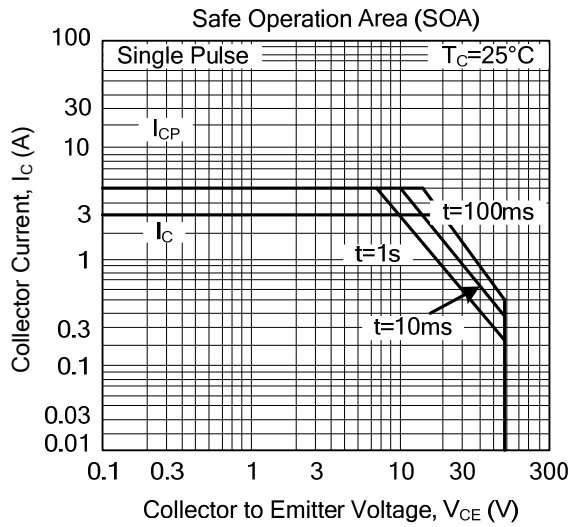
■ CLASSIFICATION OF h_{FE1}

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

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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