

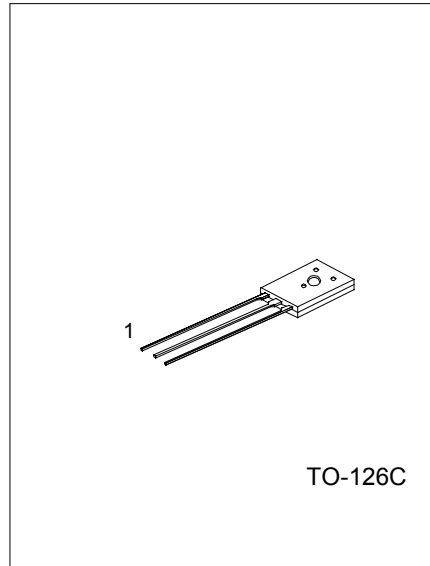
UTC 2SD1691 NPN EPITAXIAL SILICON TRANSISTOR

LOW COLLECTOR SATURATION
VOLTAGE LARGE CURRENT

FEATURES

*High Power Dissipation: $P_c=1.5W(T_a=25^\circ C)$

*Complementary to 2SB1151



1:EMITTER 2:COLLECTOR 3:BASE

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

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	60	V
Emitter-Base Voltage	V_{EB0}	7	V
Collector Current	DC	I_c	5
	Pulse (Note 1)	I_{cp}	8
Base Current	I_b	1	A
Collector Power Dissipation	$T_a=25^\circ C$	P_c	1.5
	$T_c=25^\circ C$		20
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ C$

Note 1 : $PW \leq 10ms$, Duty Cycle $\leq 50\%$

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

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	MIN	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$			10	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=7V, I_C=0$			10	μA
DC Current Gain	h_{FE1}	$V_{CE}=1V, I_C=0.1A$	60			
	h_{FE2}^*	$V_{CE}=1V, I_C=2A$	160		400	
	h_{FE3}	$V_{CE}=2V, I_C=5A$	50		-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=2A, I_B=0.2A$		0.1	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C=2A, I_B=0.2A$		0.9	1.2	V

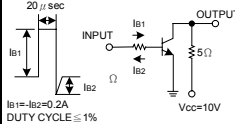
UTC UNISONIC TECHNOLOGIES CO. LTD

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QW-R217-003,A

UTC 2SD1691 NPN EPITAXIAL SILICON TRANSISTOR

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	MIN	TYP.	MAX.	UNIT
Switching Time	Turn On Time	T_{on}		0.2	1	μs
	Storage Time	T_{stg}		1.1	2.5	
	Fall Time	T_f		0.2	1	

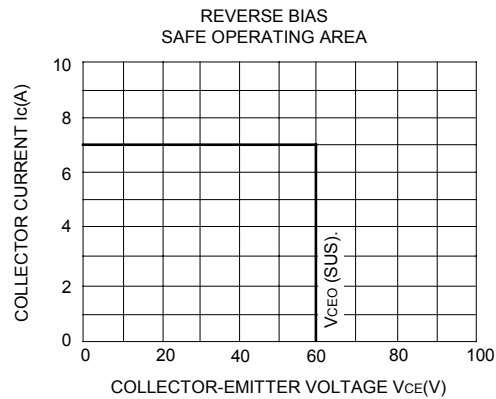
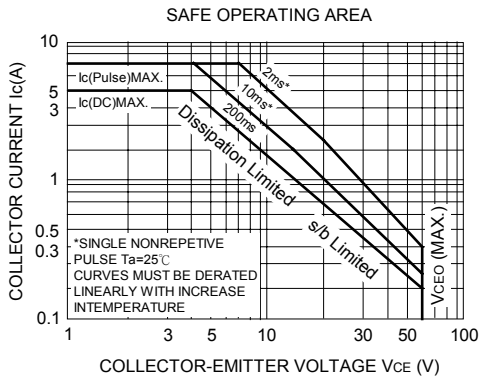
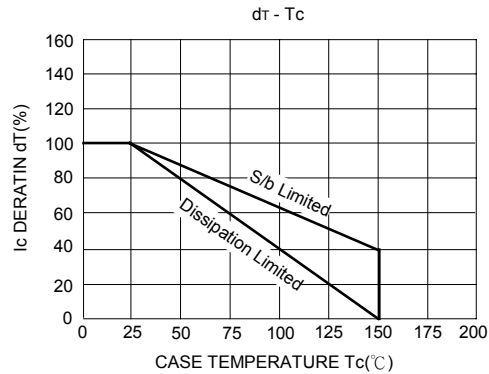
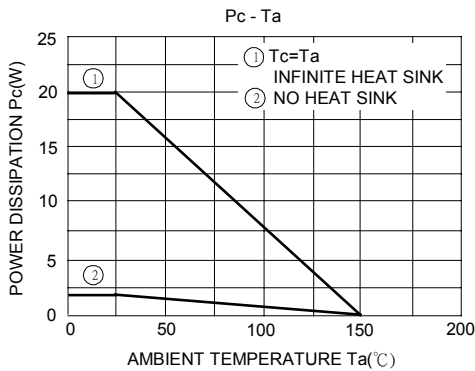


* : Pulse test: $PW \cong 50 \mu s$, Duty Cycle $\cong 2\%$ Pulse

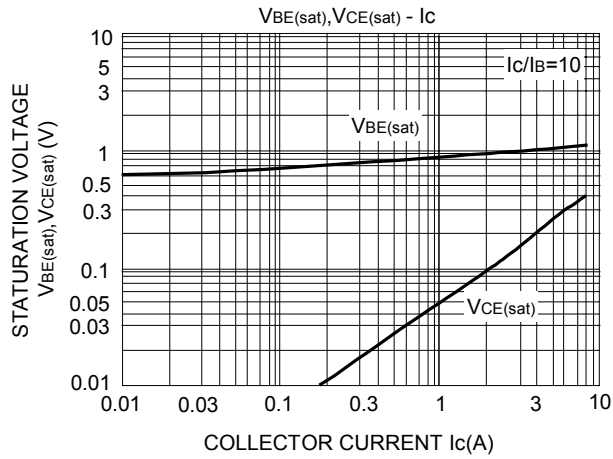
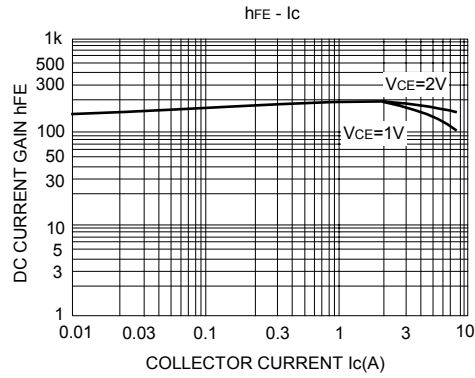
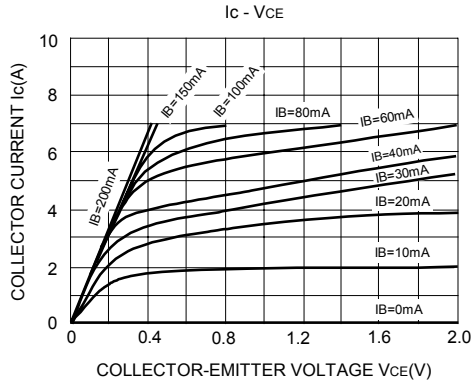
CLASSIFICATION OF h_{FE2}

RANK	O	Y
RANGE	160-320	200-400

ELECTRICAL CHARACTERISTICS CURVES



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