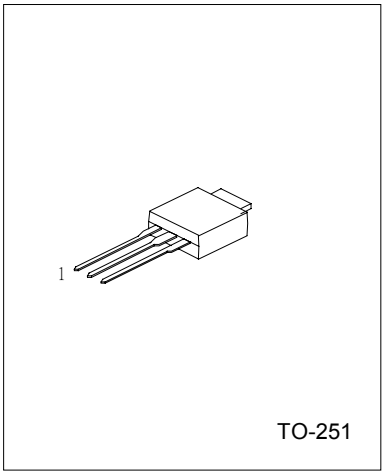
UTC 2SC3669 NPN EPITAXIAL SILICON TRANSISTOR

POWER AMPLIFIER APPLICATIONS
POWER SWITCHING APPLICATIONS



1:BASE 2:COLLECTOR 3: EMITTER

FEATURES

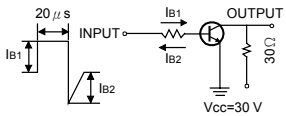
*Low saturation voltage
$V_{CE(sat)}$= 0.5V(Max)
*High speed switching time: t_{stg}=1.0 μS(Typ.)

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	LIMITS	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	Ic	2	A
Base Current	I_B	1	A
Collector Power Dissipation	Pc	1	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C

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

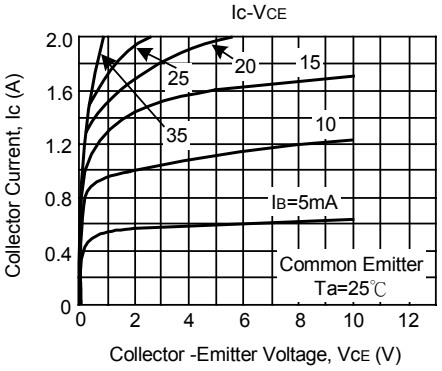
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	Ic= 10mA, I_B= 0	80			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=80V, I_E= 0			1.0	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}= 5V, Ic=0			1.0	μA
DC Current Gain	h_{FE1}	V_{CE}=2V, Ic=0.5A	70		240	
	h_{FE2}	V_{CE}=2V, Ic=1.5A	40			
Collector-Emitter Saturation Voltage	V_{CE}(sat)	Ic=1A, I_B=0.05A		0.15	0.5	V
Base- Emitter Saturation Voltage	V_{BE}(sat)	Ic=1A, I_B=0.05A		0.9	1.2	V
Transition Frequency	f_T	V_{CE}=2V, Ic=0.5A		100		MHz
Collector Output Capacitance	Cob	V_{CB}= 10V, I_E= 0, f=1MHz		30		pF

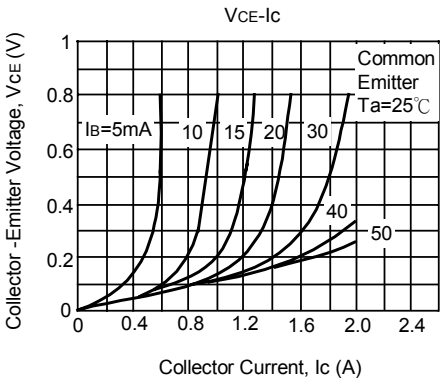
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Switching Time	Turn-on Time	t_{on}	 I_{B1}= -I_{B2}=0.05A DUTY CYCLE≦1%		0.2		μs
	Storage Time	tstg			1.0		
	Fall Time	t_f			0.2		

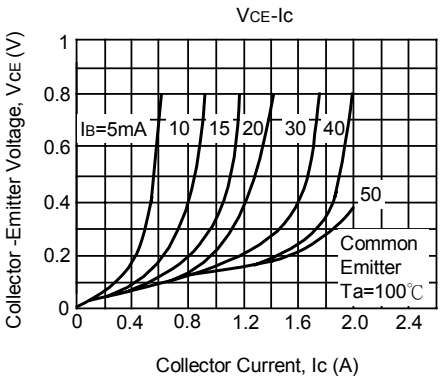
CLASSIFICATION OF hFE1

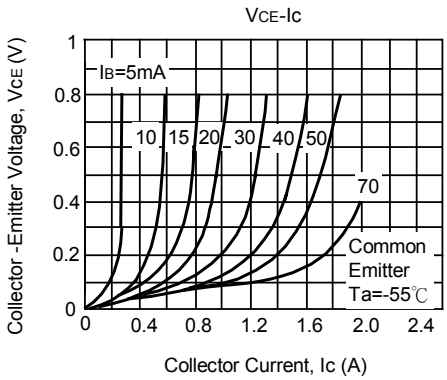
RANK	O	Y
RANGE	70-140	120-240

ELECTRICAL CHARACTERISTICS CURVES

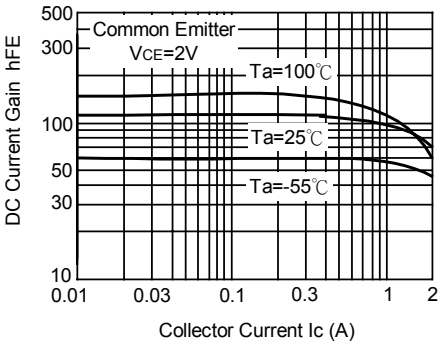




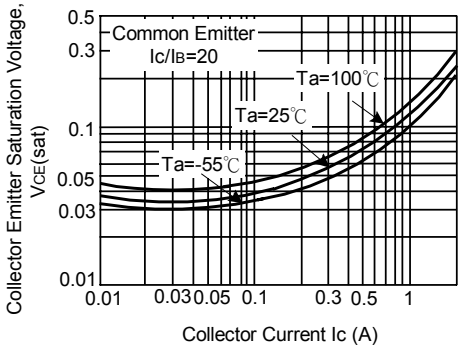




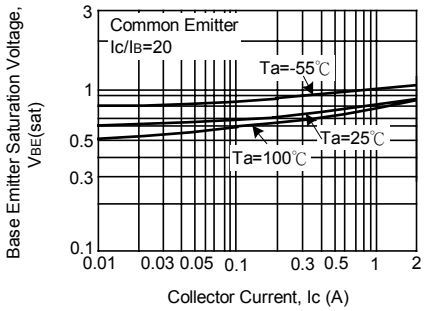
hFE -Ic



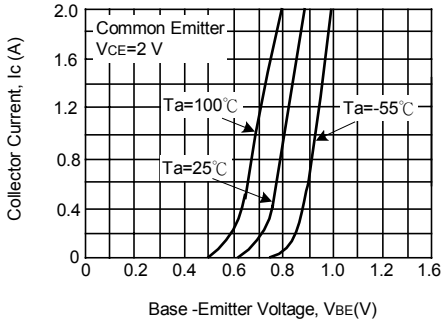
VCE(sat) -Ic



VBE(sat) -Ic



Ic-VBE



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