

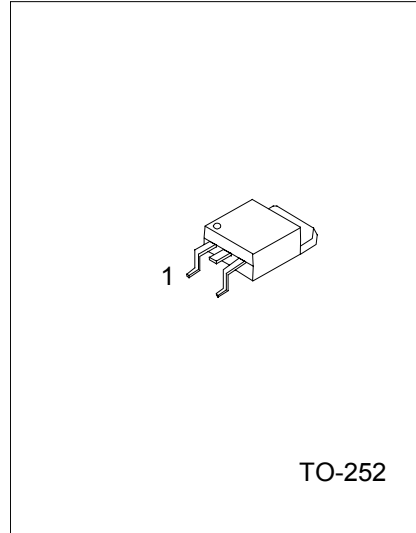
POWER AMPLIFIER APPLICATIONS  
POWER SWITCHING APPLICATIONS

## FEATURES

\*Low saturation voltage

$$V_{CE(sat)} = 0.5V(\text{Max})$$

\*High speed switching time:  $t_{stg} = 1.0 \mu\text{S}(\text{Typ.})$



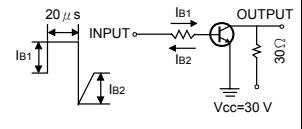
1:BASE 2:COLLECTOR 3:EMITTER

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

PARAMETER	SYMBOL	LIMITS	UNIT
Collector-Base Voltage	$V_{CB0}$	80	V
Collector-Emitter Voltage	$V_{CE0}$	80	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_c$	2	A
Base Current	$I_B$	1	A
Collector Power Dissipation	$P_c$	1	W
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)

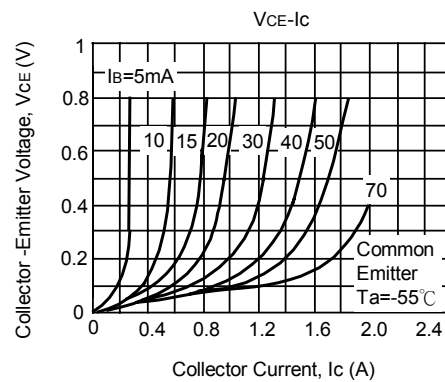
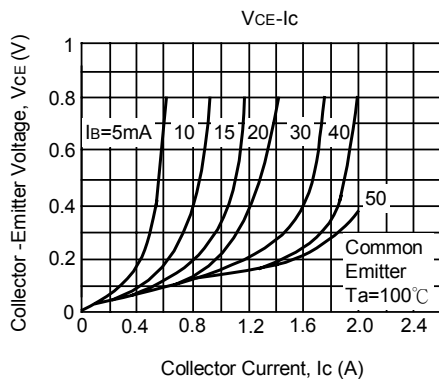
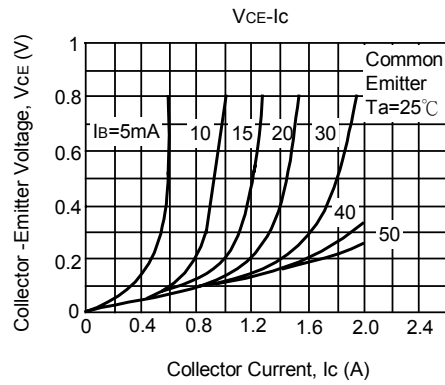
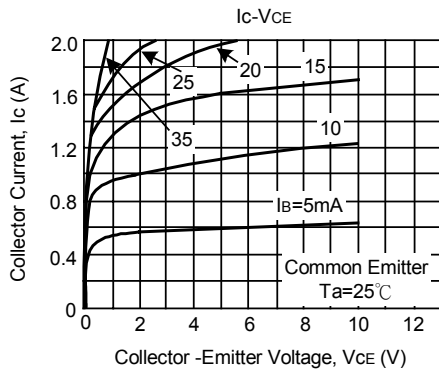
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_c = 10\text{mA}, I_B = 0$	80			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = 80\text{V}, I_E = 0$			1.0	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_c = 0$			1.0	$\mu\text{A}$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

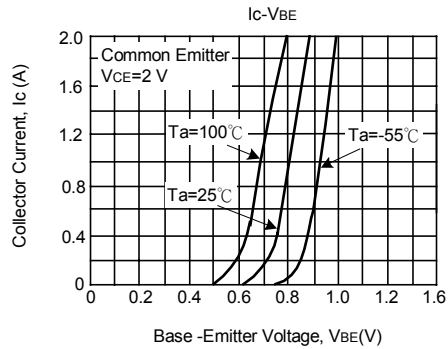
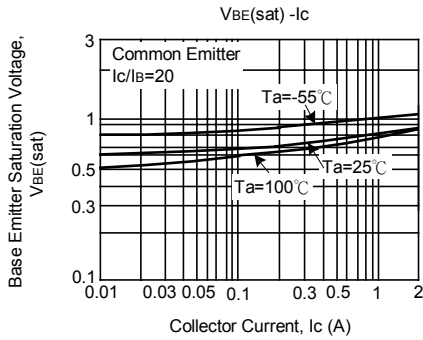
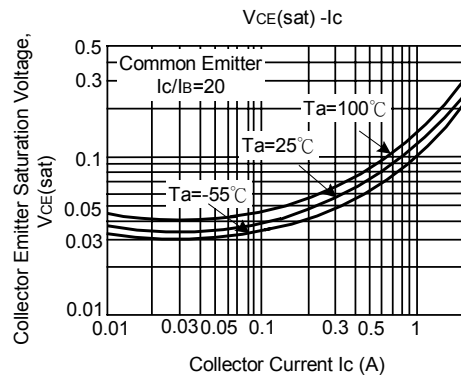
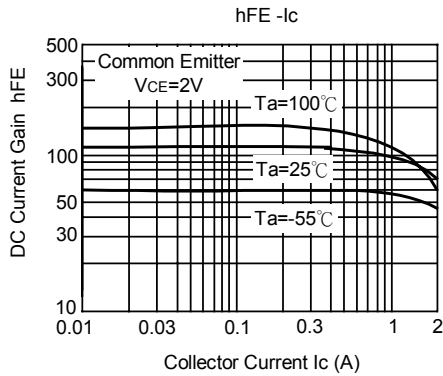
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Switching Time	Turn-on Time	 <p> <math>I_{B1} = -I_{B2} = 0.05A</math>                      DUTY CYCLE <math>\cong 1\%</math> </p>		0.2		$\mu S$
	Storage Time			1.0		
	Fall Time			0.2		

CLASSIFICATION OF hFE1

RANK	O	Y
RANGE	70-140	120-240

ELECTRICAL CHARACTERISTICS CURVES





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. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.