

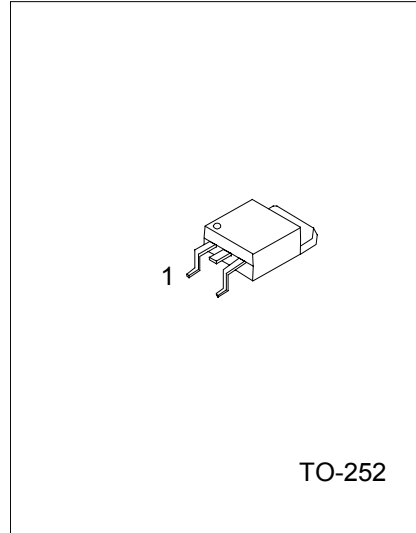
POWER AMPLIFIER APPLICATIONS
POWER SWITCHING APPLICATIONS

FEATURES

*Low saturation voltage

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

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



TO-252

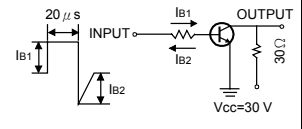
1:BASE 2:COLLECTOR 3:EMITTER

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

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	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)

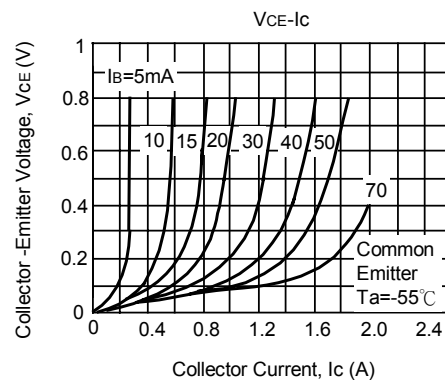
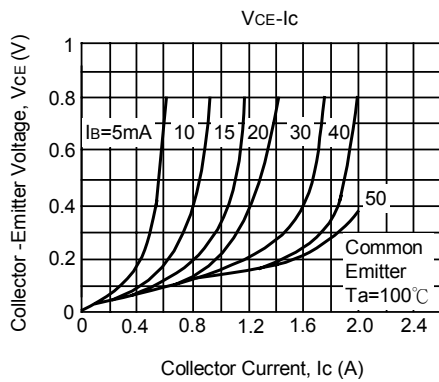
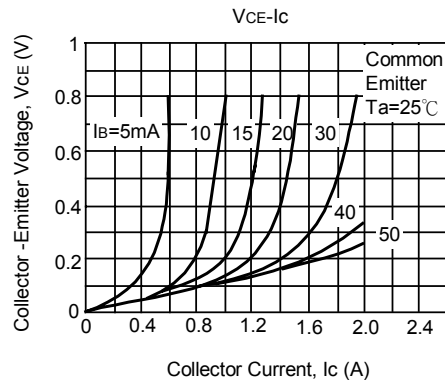
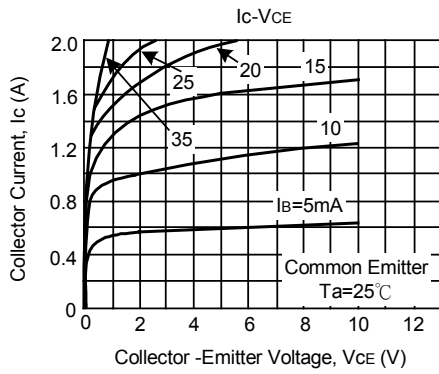
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_c = 10\text{mA}, I_B = 0$	80			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 80V, I_E = 0$			1.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5V, I_c = 0$			1.0	μA
DC Current Gain	h_{FE1}	$V_{CE} =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

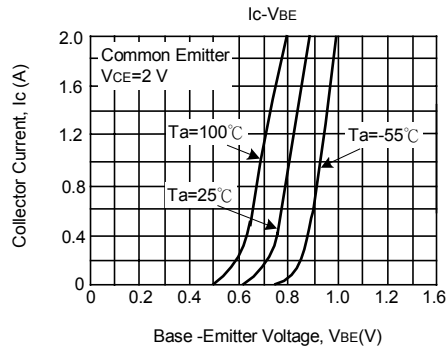
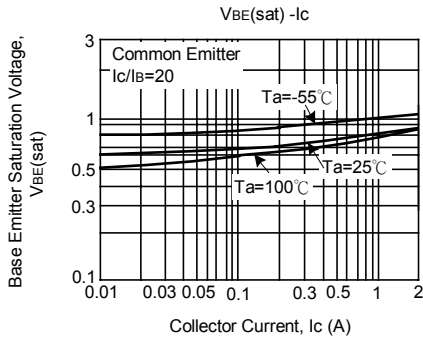
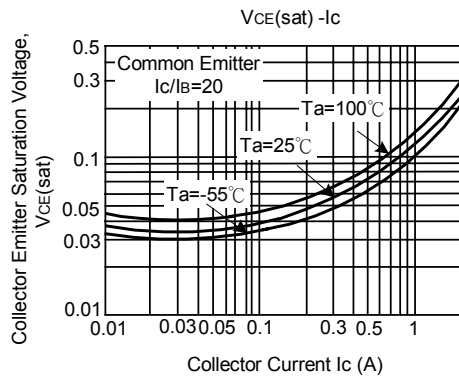
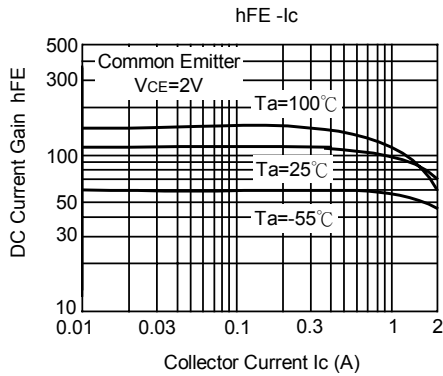
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Switching Time	Turn-on Time	 $I_{B1} = -I_{B2} = 0.05A$ DUTY CYCLE $\cong 1\%$		0.2		μS
	Storage Time			1.0		
	Fall Time		t_f		0.2	

CLASSIFICATION OF hFE1

RANK	O	Y
RANGE	70-140	120-240

ELECTRICAL CHARACTERISTICS CURVES





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