



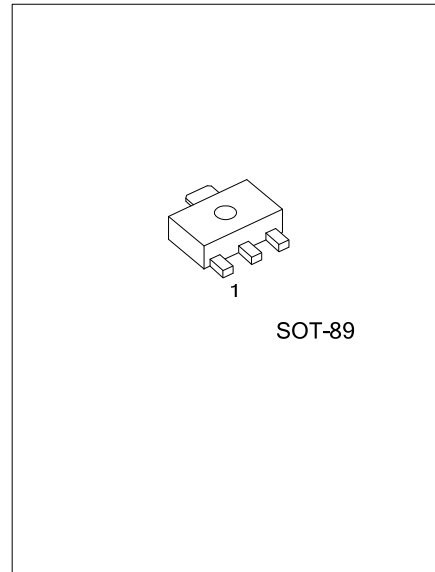
2SC4548

NPN SILICON TRANSISTOR

HIGH VOLTAGE DRIVER APPLICATION

FEATURES

- *High breakdown voltage.
- *Excellent h_{FE} linearity.



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC4548L-x-AB3-R	2SC4548G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: E: EMITTER C: COLLECTOR B: BASE

<p>2SC4548L-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Free</p>	<p>(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE} (4) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	400	V
Collector-Emitter Voltage	V_{CE0}	400	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	200	mA
Collector Current (PULSE)	I_{CP}	400	mA
Collector Power Dissipation	P_C	1.3	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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.

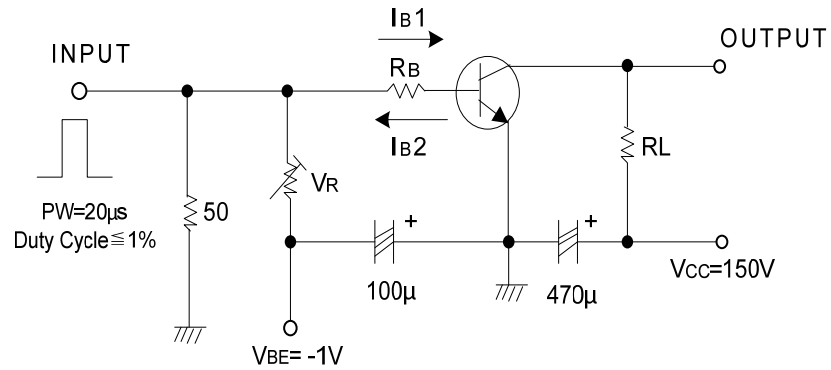
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collect-Base Breakdown Voltage	BV_{CB0}	$I_C=10\mu\text{A}, I_E=0$	400			V
Collect-Emitter Breakdown Voltage	BV_{CE0}	$I_C=1\text{mA}, I_B=0, R_{BE}=\infty$	400			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector Cutoff Current	I_{CB0}	$V_{CB}=300\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC Current Transfer Ratio	h_{FE}	$V_{CE}=10\text{V}, I_C=50\text{mA}$	60		200	
Collect-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5\text{mA}$		0.6		V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			1.0	V
Output Capacitance	C_{OB}	$V_{CB}=30\text{V}, f=1\text{MHz}$		4		pF
Reverse Transfer Capacitance	C_{RE}	$V_{CB}=30\text{V}, f=1\text{MHz}$		3		pF
Gain-Bandwidth Product	f_T	$V_{CE}=30\text{V}, I_C=10\text{mA}$		70		MHz
Turn-on Time	T_{ON}	See test circuit		0.25		μs
Turn-off Time	T_{OFF}	See test circuit		5.0		μs

■ CLASSIFICATION OF h_{FE}

RANK	D	E
RANGE	60-120	100-200

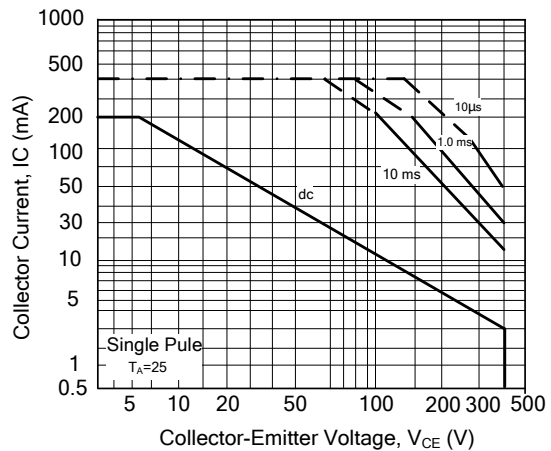
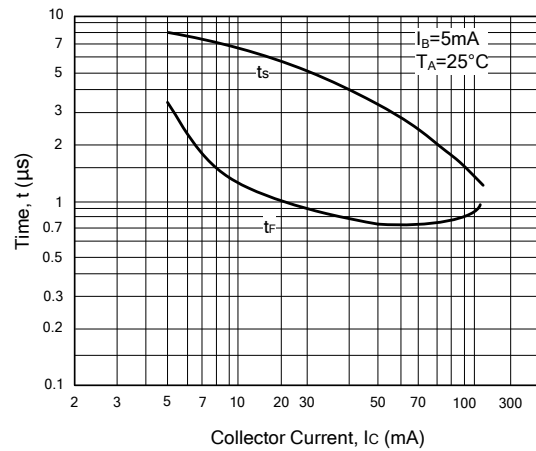
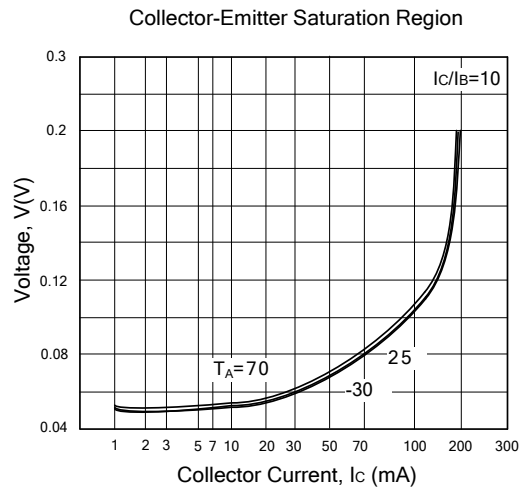
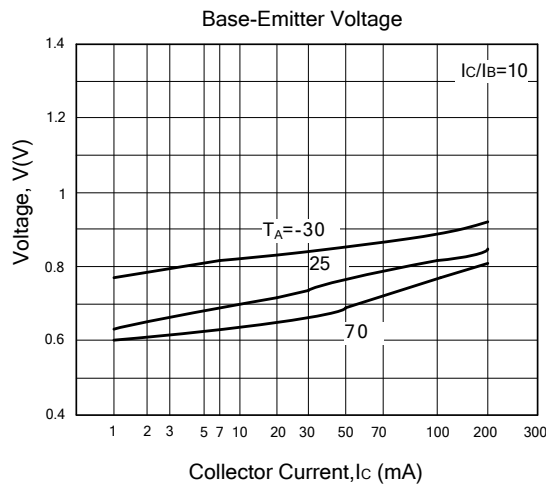
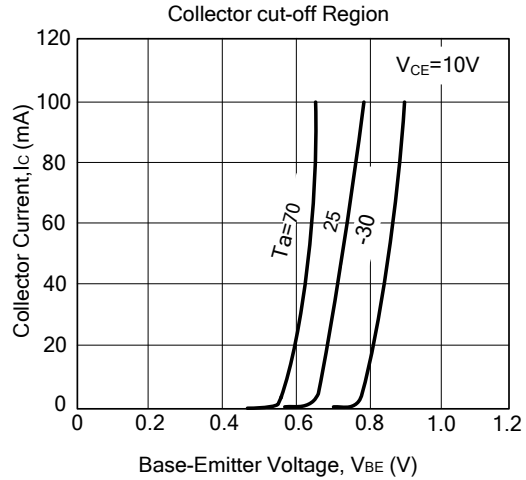
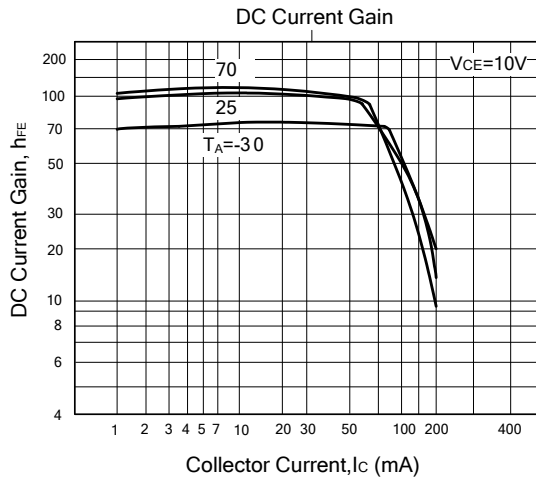
■ TEST CIRCUIT (Unit : resistance : Ω , capacitance : F)



$$10I_{B1} = -10I_{B2} = I_C = 50\text{mA}$$

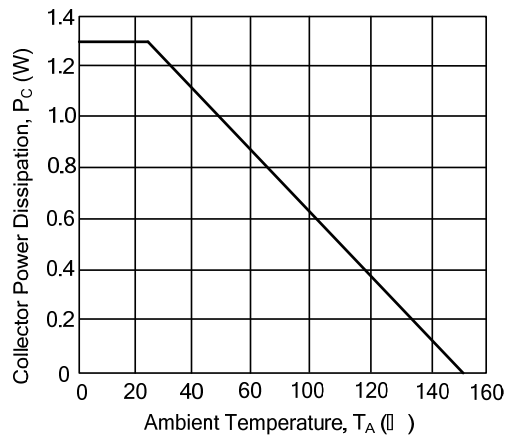
$$R_L = 3\text{k}\Omega, R_B = 200\Omega \text{ at } I_C = 50\text{mA}$$

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS

Collector Power Dissipation vs. Ambient Temperature



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