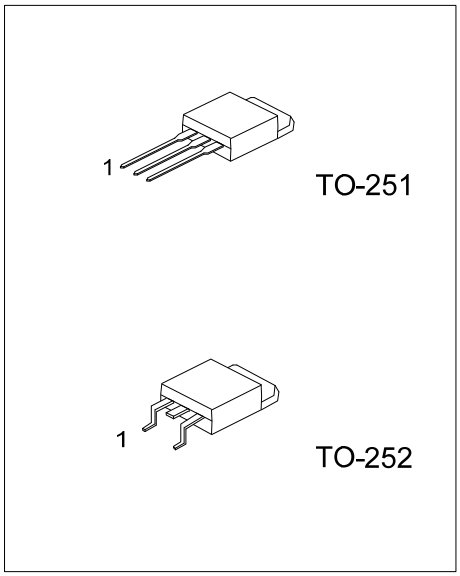
2SA1700

PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE DRIVER APPLICATION



■ FEATURES

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

■ ORDERING INFORMATION

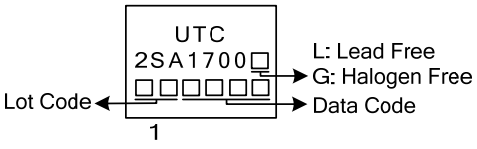
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SA1700L-x-TM3-T	2SA1700G-x-TM3-T	TO-251	B	C	E	Tube
2SA1700L-x-TN3-R	2SA1700G-x-TN3-R	TO-252	B	C	E	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

2SA1700L-x-TM3-T
(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

(1) T: Tube, R: Tape Reel
(2) TM3: TO-251, TN3: TO-252
(3) x: refer to Classification of h_{FE}
(4) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-200	mA
Collector Current (PULSE)	I_{CP}	-400	mA
Power Dissipation	P_D	1	W
		10 (T_C=25°C)	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note 1. 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.

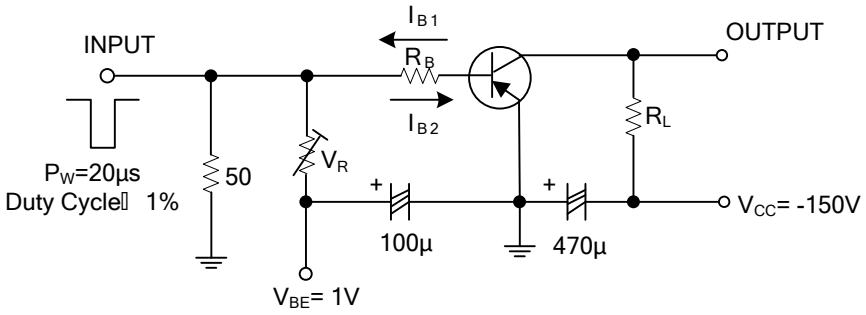
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C= -10μA, I_E=0	-400			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C= -1mA, I_B=0, R_{BE}=∞	-400			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E= -10μA, I_C=0	-5			V
Collector Cutoff Current	I_{CBO}	V_{CB}= -300V, I_E=0			-0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}= -4V, I_C=0			-0.1	μA
DC Current Transfer Ratio	h_{FE}	V_{CE}= -10V, I_C= -50mA	60		200	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C= -50mA, I_B= -5mA			-0.8	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C= -50mA, I_B= -5mA			-1.0	V
Output Capacitance	C_{OB}	V_{CB}= -30V, f=1MHz		5		pF
Reverse Transfer Capacitance	C_{RE}	V_{CB}= -30V, f=1MHz		4		pF
Gain-Bandwidth Product	f_T	V_{CE}= -30V, I_C= -10mA		70		MHz
Turn-on Time	t_{ON}	See test circuit		0.25		μs
Turn-off Time	t_{OFF}	See test circuit		5		μs

■ CLASSIFICATION OF h_{FE}

RANK	D	E
RANGE	60-120	100-200

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



$-10I_{B1}= 10I_{B2}=Ic= -50mA$
$R_L=3kΩ$, $R_B=200Ω$ at Ic= -50mA