



2SD1624

NPN SILICON TRANSISTOR

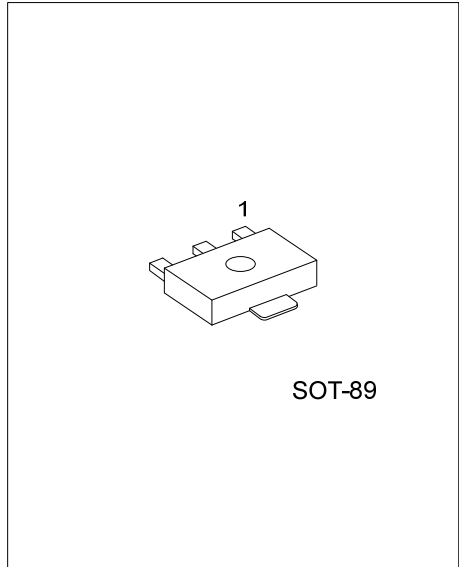
HIGH CURRENT SWITCHING APPLICATION

DESCRIPTION

The UTC **2SD1624** applies to voltage regulators, relay drivers, lamp drivers, and electrical equipment.

FEATURES

- * Adoption of FBET, MBIT processes
- * Low collector-to-emitter saturation voltage
- * Fast switching speed.
- * Large current capacity and wide ASO.

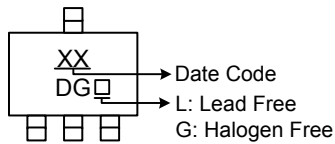


ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD1624L-x-AB3-R	2SD1624G-x-AB3-R	SOT-89	B	C	E	Tape Reel

<p>2SD1624L-x-AB3-R</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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MARKING



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector-Base Voltage	V_{CBO}	60	V	
Collector-Emitter Voltage	V_{CEO}	50	V	
Emitter-Base Voltage	V_{EBO}	6	V	
Collector Power Dissipation(Tc=25°C)	P_C	500	mW	
Collector Current	DC	I_C	3	A
	PULSE	I_{CP}	6	A
Junction Temperature	T_J	150	°C	
Storage Temperature	T_{STG}	-55 ~ +150	°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.

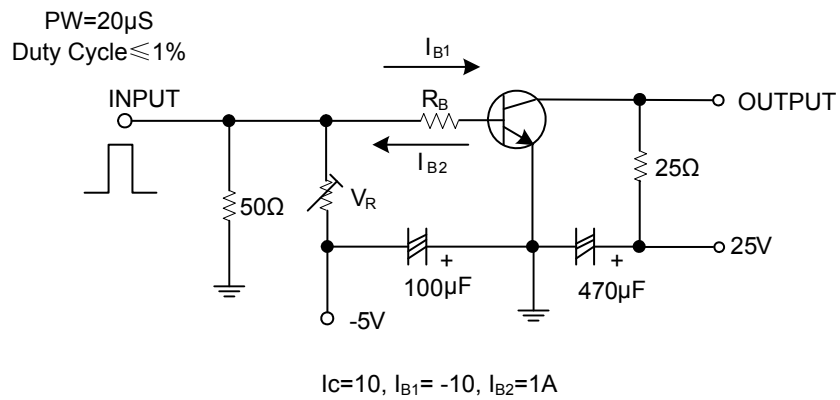
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=10\mu A, I_E=0$	60			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, R_{BE}=\infty$	50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	6			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=2A, I_B=100mA$		0.19	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=2A, I_B=100mA$		0.94	1.2	V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=40V, I_E=0$			1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4V, I_C=0$			1	μA
DC Current Gain	h_{FE}	$V_{CE}=2V, I_C=100mA$	100		560	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=50mA$		150		MHz
Output Capacitance	C_{OB}	$V_{CE}=10V, f=1MHz$		25		pF
Turn-ON Time	t_{ON}	See test circuit		70		ns
Storage Time	t_{STG}	See test circuit		650		ns
Fall Time	t_F	See test circuit		35		ns

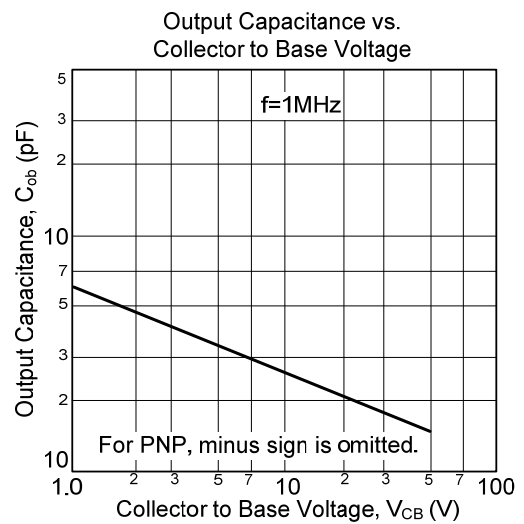
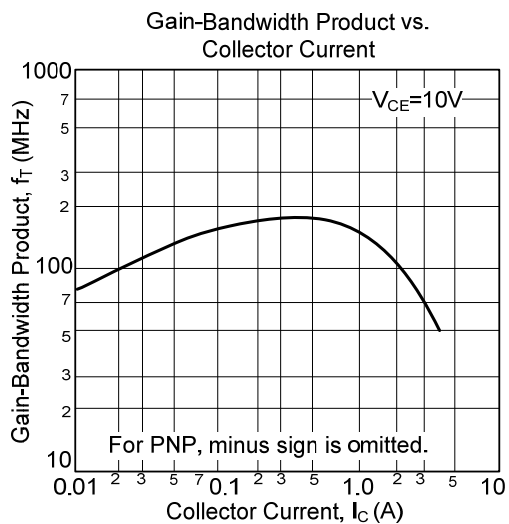
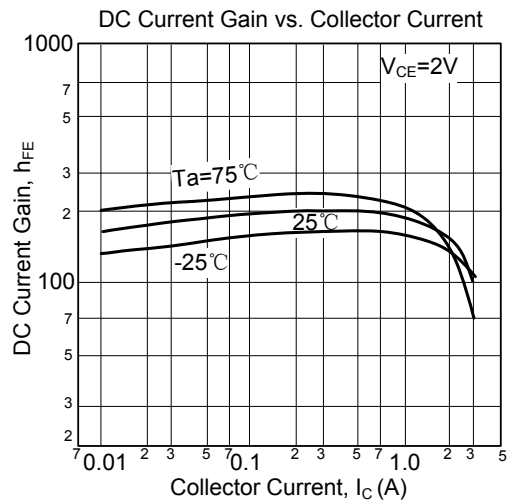
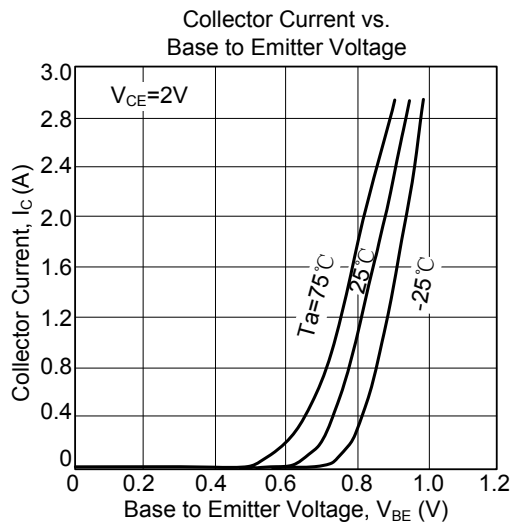
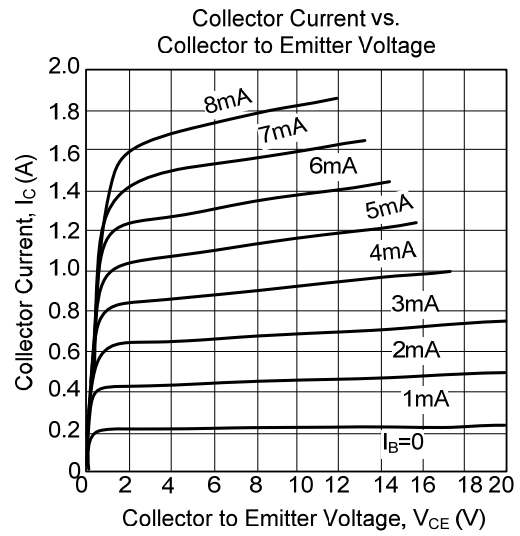
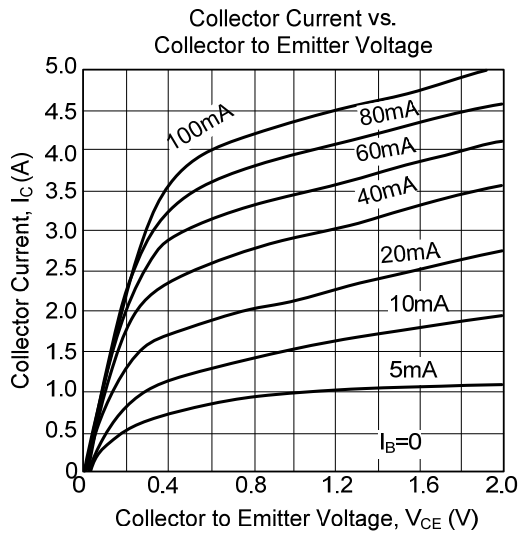
■ CLASSIFICATION OF h_{FE}

RANK	R	S	T	U
RANGE	100-200	140-280	200-400	280-560

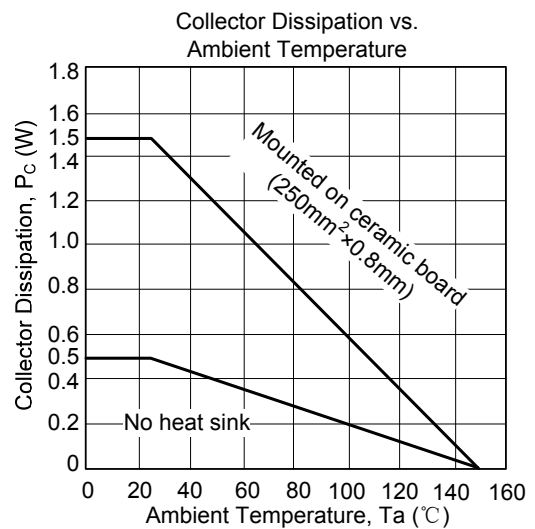
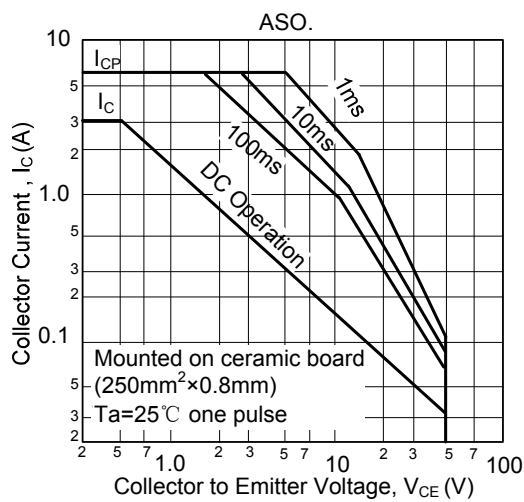
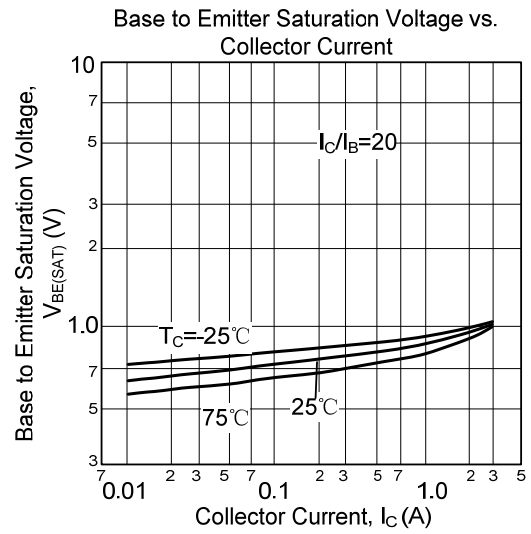
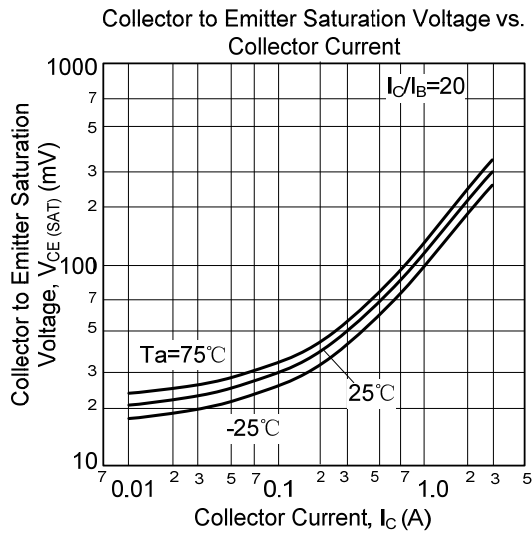
■ TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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