



2SD1624

NPN SILICON TRANSISTOR

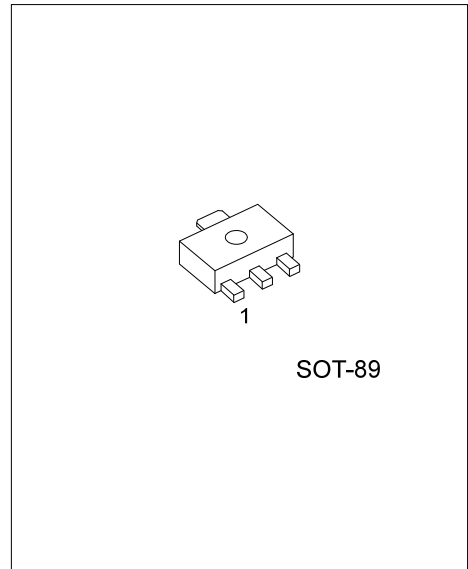
HIGH CURRENT SWITCHING APPLICATION

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



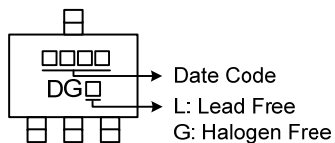
ORDERING INFORMATION

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

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

<p>2SD1624G-x-AB3-R</p>	<p>(1) Packing Type (1) R: Tape Reel</p> <p>(2) Package Type (2) AB3: SOT-89</p> <p>(3) Rank (3) x: refer to Classification of h_{FE}</p> <p>(4) Green Package (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=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(T _C =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.

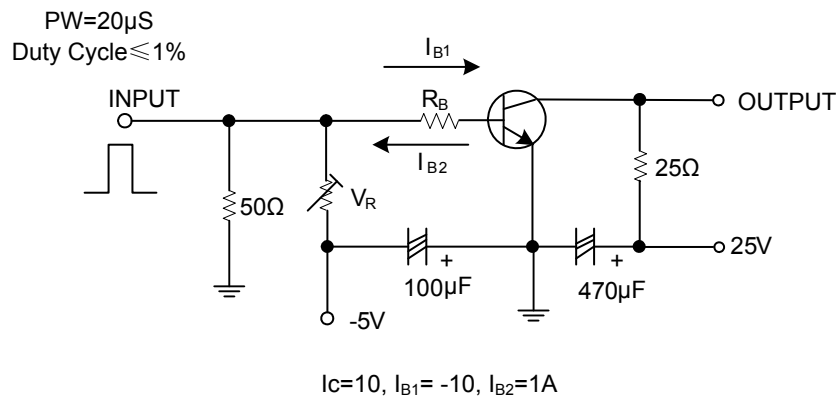
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CBO}	I _C =10μA, I _E =0	60			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA, R _{BE} =∞	50			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =10μA, 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

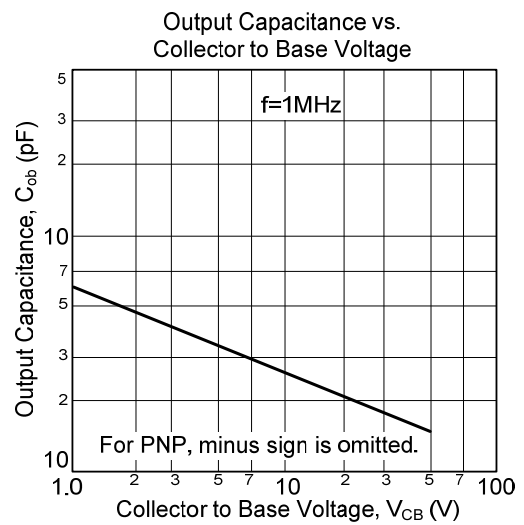
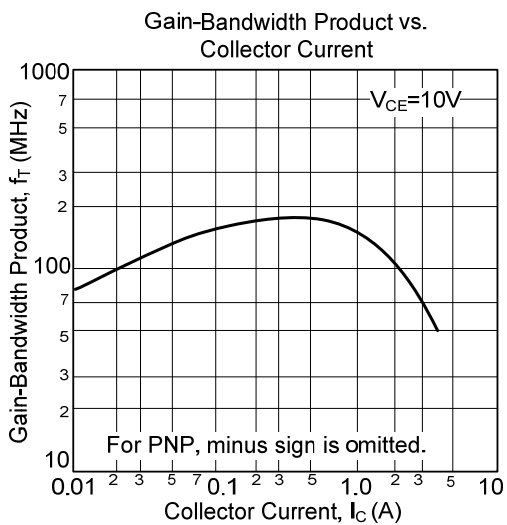
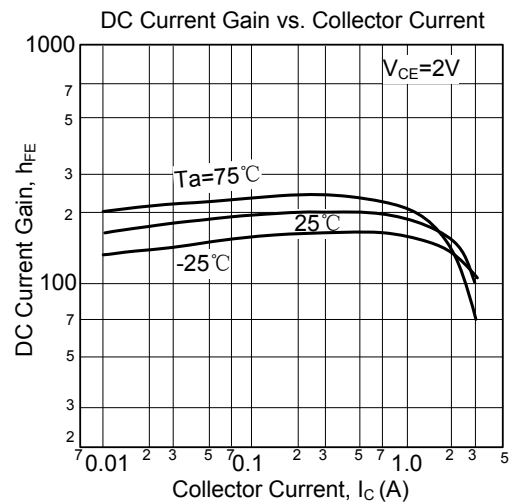
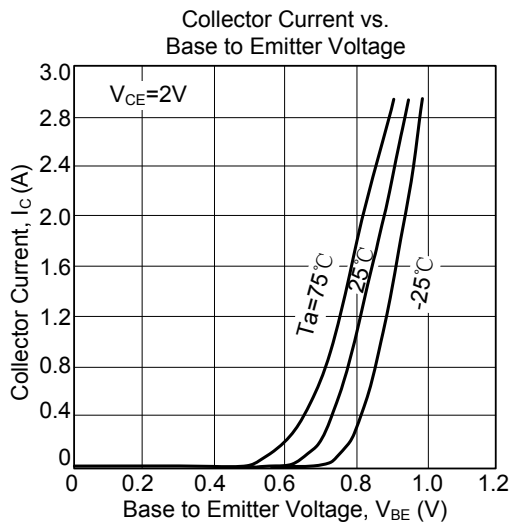
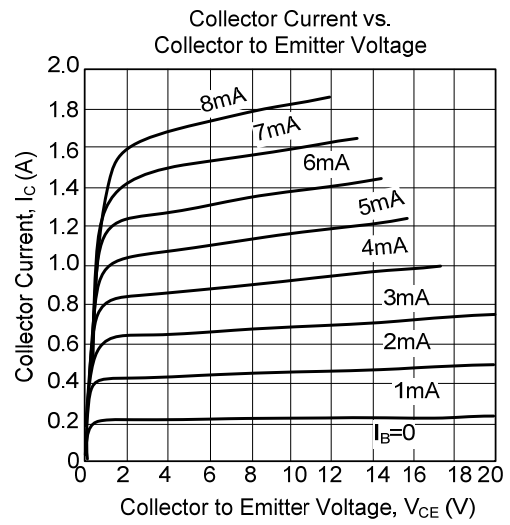
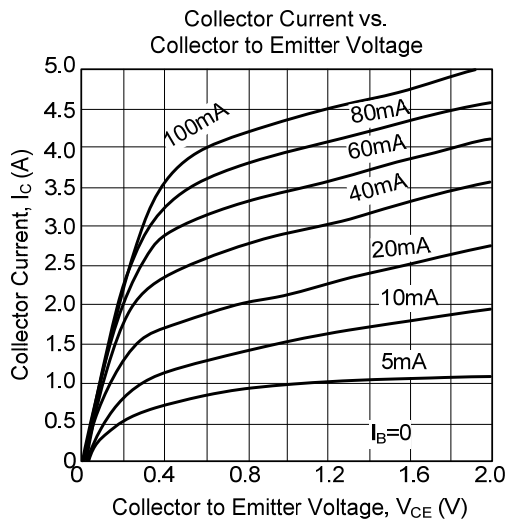
■ CLASSIFICATION OF h_{FE}

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

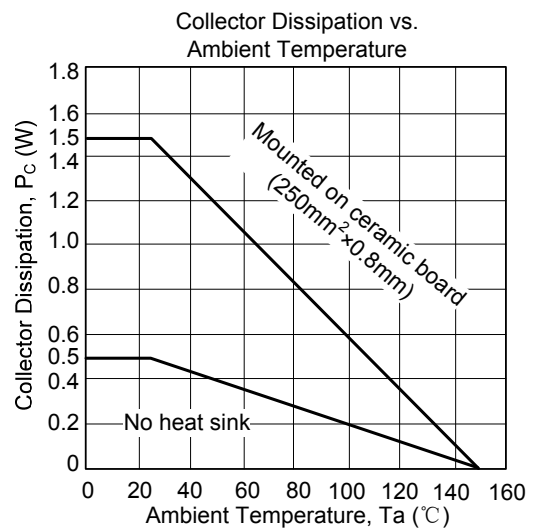
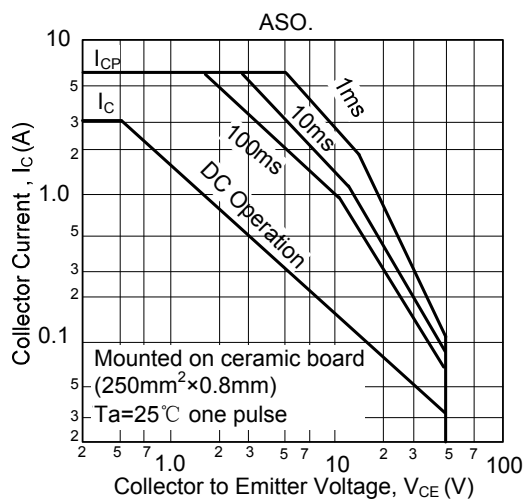
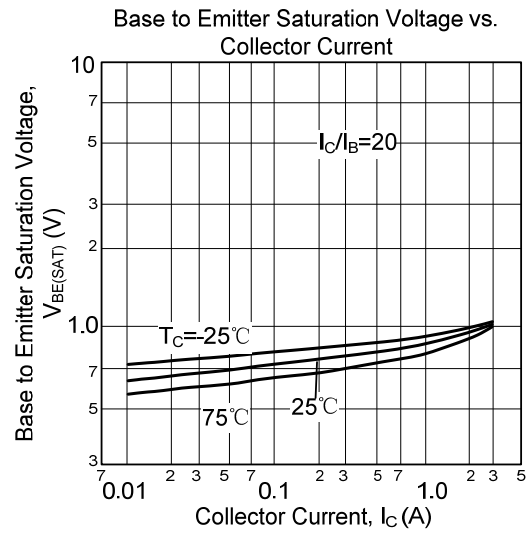
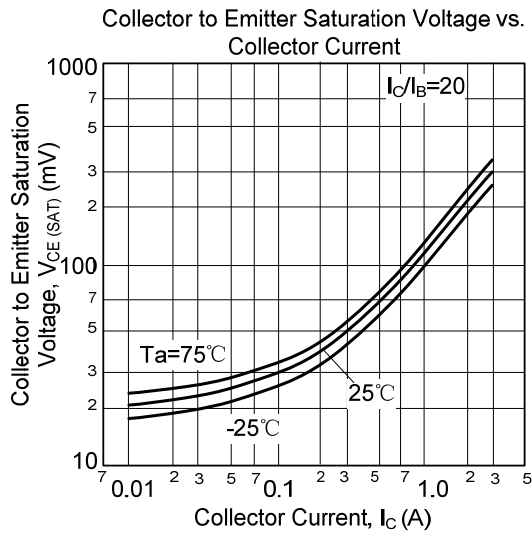
■ TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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