



2SD1624

NPN SILICON TRANSISTOR

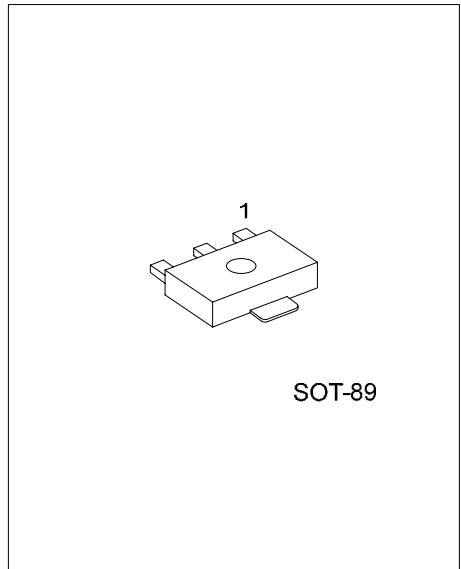
HIGH CURRENT SWITCHING APPLICATION

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.



SOT-89

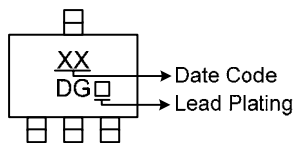
*Pb-free plating product number: 2SD1624L

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SD1624-x-AB3-R	2SD1624L-x-AB3-R	SOT-89	B	C	E	Tape Reel

<p>2SD1624L-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p>	<p>(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE} (4) L: Lead Free Plating, Blank: Pb/Sn</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)	Pc	500	mW
Collector Current	DC	Ic	3
	PULSE	Icp	6
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 =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

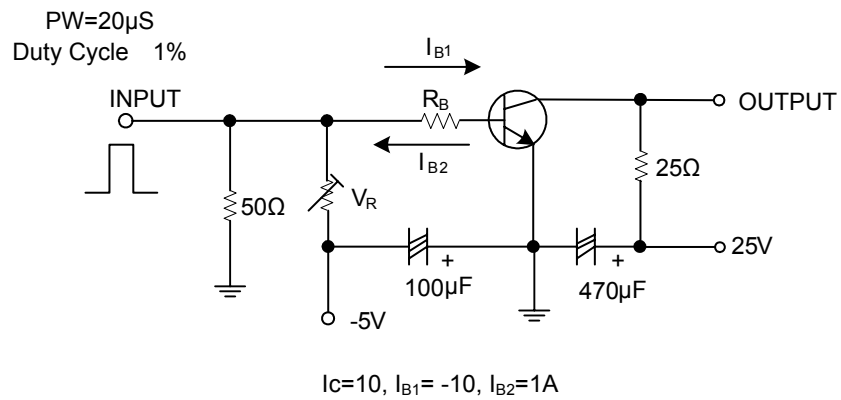
■ CLASSIFICATION OF h_{FE}

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

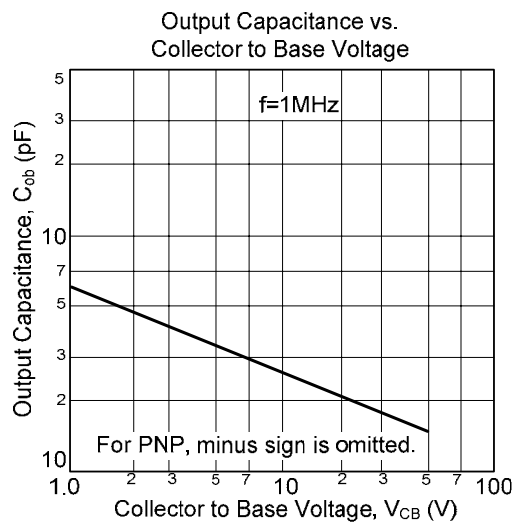
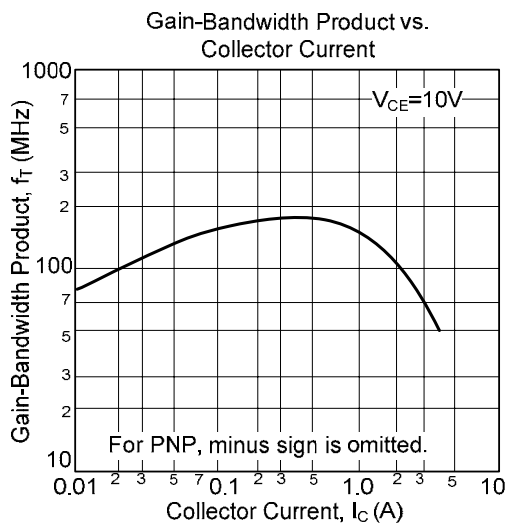
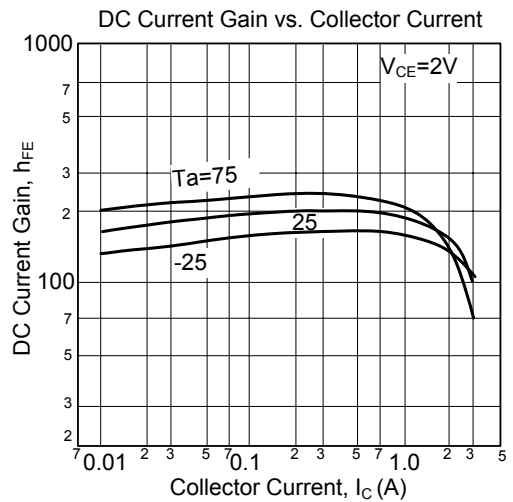
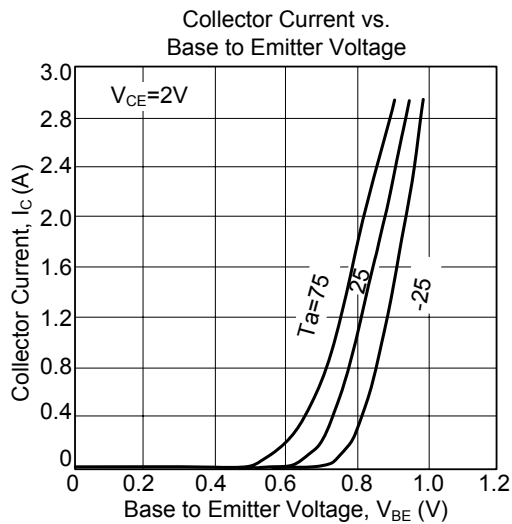
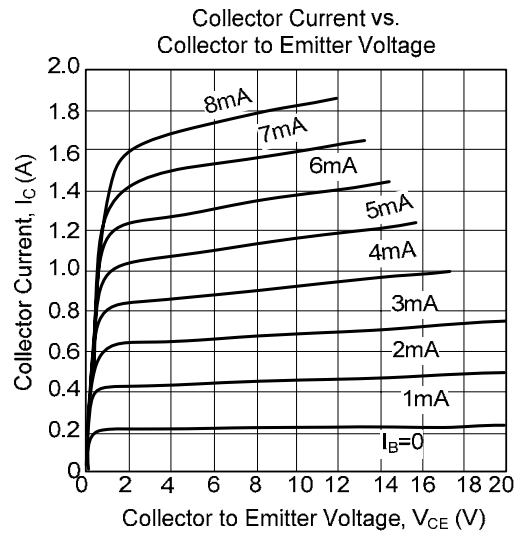
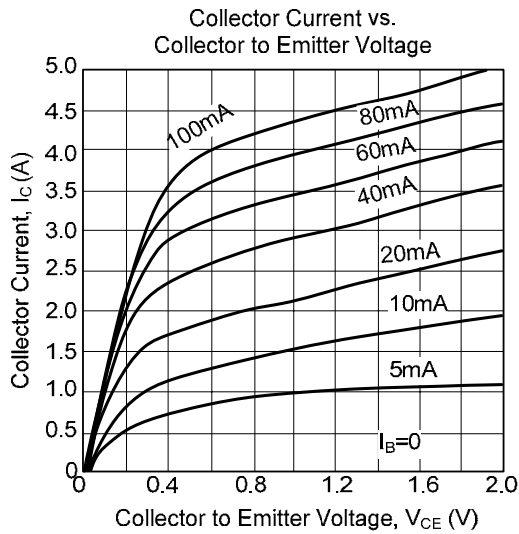
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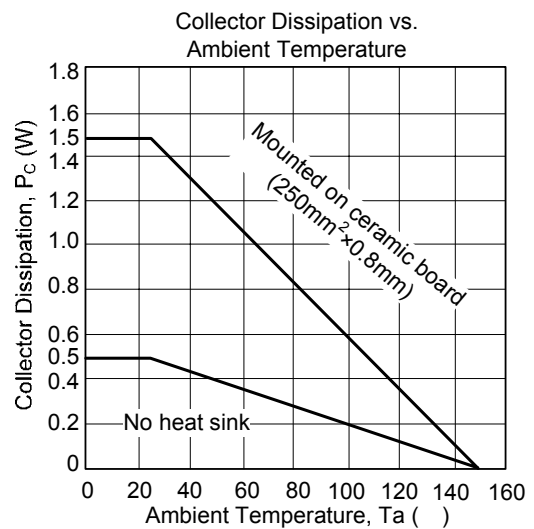
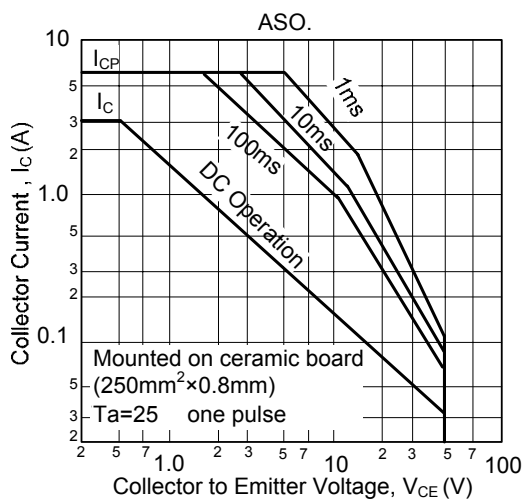
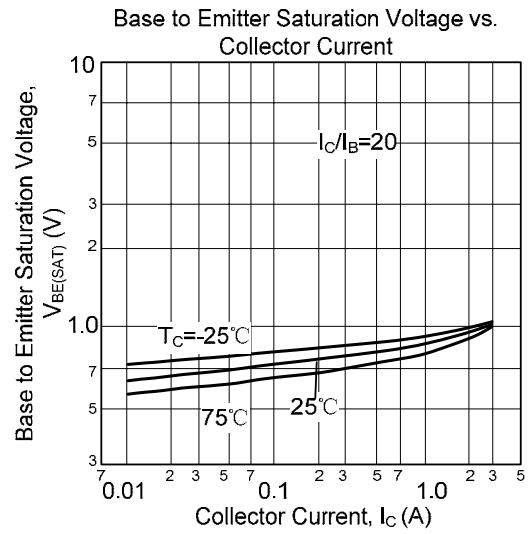
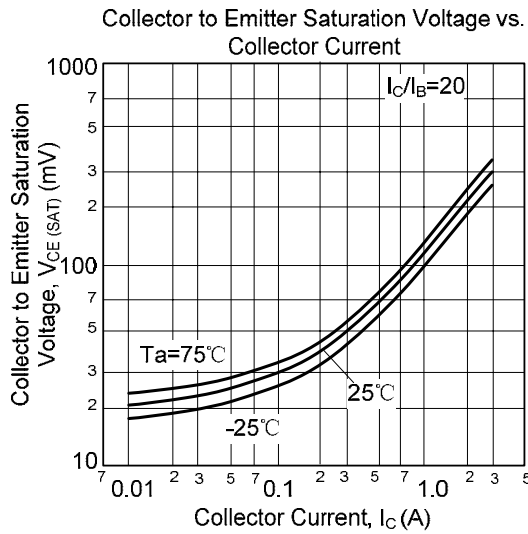
■ TEST CIRCUIT



TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



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