

SILICON TRANSISTOR 2SD1033

NPN SILICON EPITAXIAL TRANSISTOR MP-3

DESCRIPTION

2SD1033 is designed for Color TV Vertical Deflection Output, especially in Hybrid Integrated Circuits.

FEATURES

- High Voltage VcEo = 150 V
- Complement to 2SB768

QUALITY GRADE

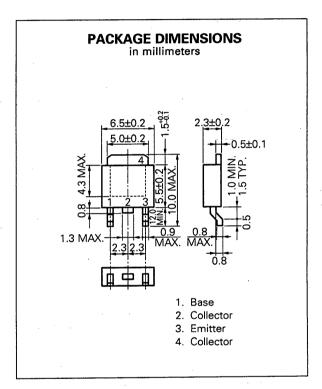
Standard

Please refer to "Quality grade on NEC Semiconductor Devices" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Collector to Base Voltage	Vсво	200	٧
Collector to Emitter Voltage	Vceo	150	٧
Emitter to Base Voltage	Vево	5	٧
Collector Current (DC)	lc	2	Α
Collector Current (Pulse)*	lc	3	Α
Total Power Dissipation (Ta = 25 °C)**	Рт	2.0	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

- *PW ≦ 10 ms, Duty Cycle ≦ 50 %
- **When mounted on ceramic substrate of 7.5 $cm^2 \times 0.7$ mm



ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

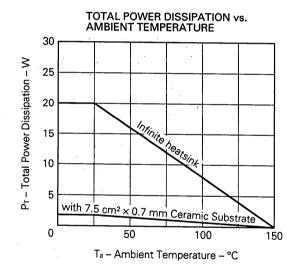
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	Ісво		·	50	μΑ	VcB = 150 V, IE = 0
Emitter Cutoff Current	IEBO .			50	μΑ	VEB = 4 V, Ic = 0
DC Current Gain	hre ***	40	100	200		Vce = 10 V, lc = 0.4 A
Collector Saturation Voltage	VCE(sat) ***		0.2	1.0	V	Ic = 500 mA, IB = 50 mA
Gain Bandwidth Product	ff · · · ·		10		MHz	Vce = 10 V, le = 0.4 A

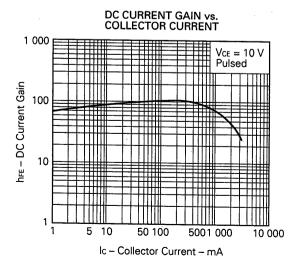
^{***}Pulsed: PW \leq 350 μ s, Duty Cycle \leq 2 %

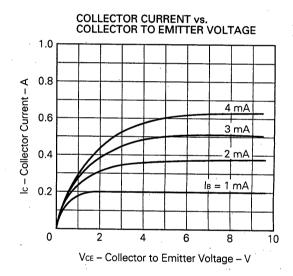
hre Classification

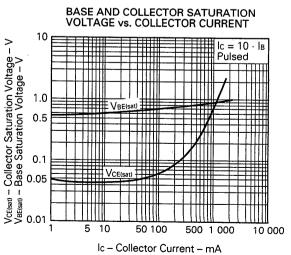
MARKING	М	L	K
hfE	40 to 80	60 to 120	100 to 200

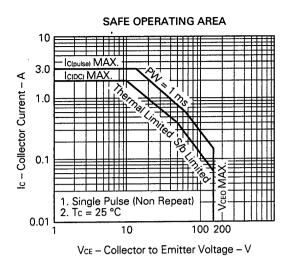
TYPICAL CHARACTERISTICS (Ta = 25 °C)

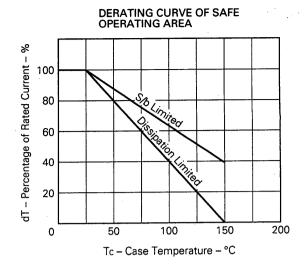












Reference

Application note name	No.
Quality control of NEC semiconductors devices.	TEI-1202
Quality control guide of semiconductors devices.	MEI-1202
Assembly manual of semiconductors devices.	IEI-1207
Design of Push-Pull Type Switching Regulators (Basic)	TEB-1002
Design oif Push-Pull Type Switching Regulators (Applications)	TEB-1003
Optimum Base Drive Conditions of Switching Power Transistors	TEB-1014

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The devices listed in this document are not suitable for use in aerospace equipment, submarine cables, nuclear reactor control systems and life support systems. If customers intend to use NEC devices for above applications or they intend to use "Standard" quality grade NEC devices for applications not intended by NEC, please contact our sales people in advance.

Application examples recommended by NEC Corporation.

Standard: Computer, Office equipment, Communication equipment, Test and Measurement equipment, Machine tools, Industrial robots, Audio and Visual equipment, Other consumer products, etc.

Special: Automotive and Transportation equipment, Traffic control systems, Antidisaster systems, Anticrime systems, etc.

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