NPN Epitaxial Planar Silicon Transistor



2SC4482

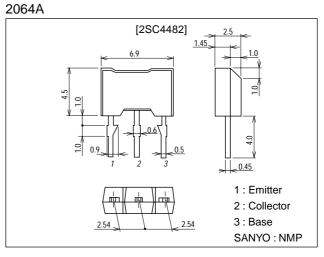
# **High-Current Switching Applications**

## Features

- $\cdot$  Low saturation voltage.
- · Large current capacity.
- · Fast switching speed.

# **Package Dimensions**

unit:mm



# **Specifications**

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		60	V
Collector-to-Emitter Voltage	VCEO		20	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		5	A
Collector Current (Pulse)	ICP		8	A
Collector Dissipation	PC		1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

### **Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =50V, I <sub>E</sub> =0			100	nA
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =5V, I <sub>C</sub> =0			100	nA
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA	140*		560*	
	h <sub>FE</sub> 2	V <sub>CE</sub> =2V, I <sub>C</sub> =3A	95			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		150		MHz
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		45		pF

 $\ast$  : The 2SC4482 is classified by 500mA  $h_{FE}$  as follows :

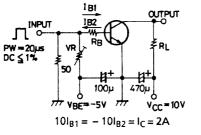
140 S 280 200 T 400 280 U 560

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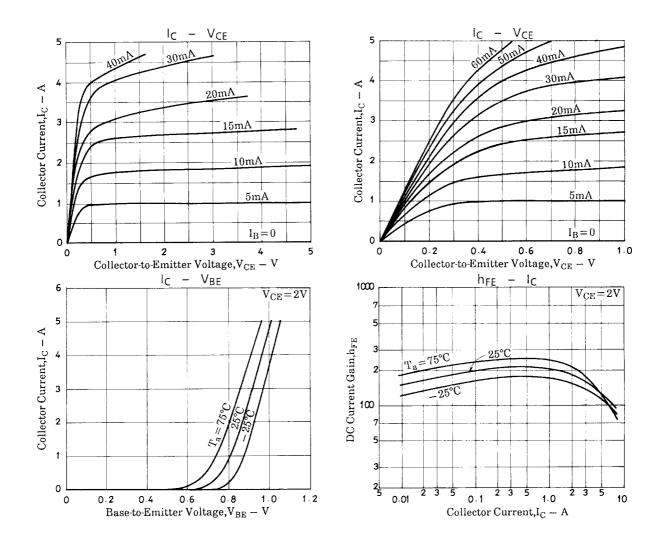
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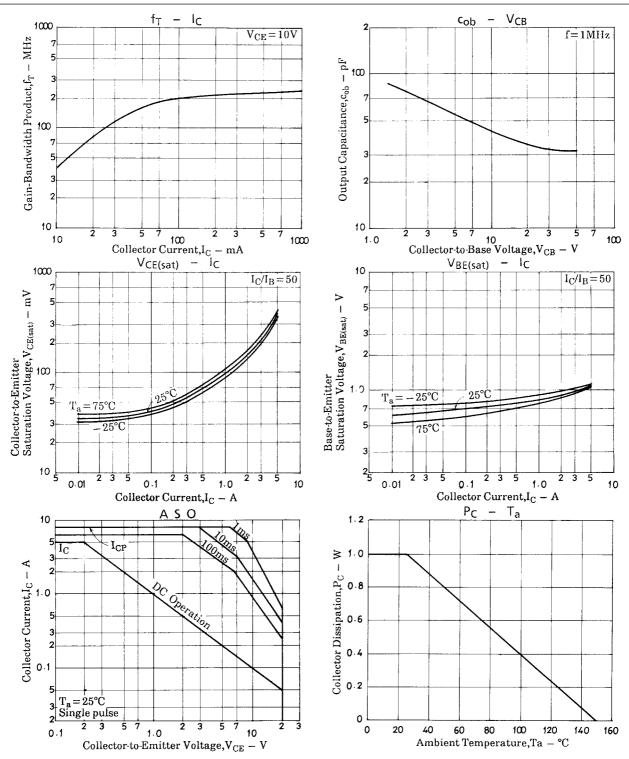
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =3A, I <sub>B</sub> =60mA		220	500	mV
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =60mA			1.5	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10μA, I <sub>E</sub> =0	60			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	20			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6			V
Turn-ON Time	ton	See specified test circuit.		30		μs
Storage Time	<sup>t</sup> stg	See specified test circuit.		300		μs
Fall Time	t <sub>f</sub>	See specified test circuit.		40		μs

### **Switching Time Test Circuit**



Unit (resistance :  $\Omega$ , capacitance : F)





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