

**2SC4475**

## 1800V/3mA High-Voltage Amplifier, High-Voltage Switching Applications

### Applications

- High voltage amplifier.
- High voltage switching.
- Dynamic focus.

### Features

- High breakdown voltage ( $V_{CEO}$  min=1800V).
- Small  $C_{ob}$  ( $C_{ob}$  typ=1.4pF).
- Wide ASO.
- High reliability (Adoption of HVP process).

### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		2000	V
Collector-to-Emitter Voltage	$V_{CEO}$		1800	V
Emitter-to-Base Voltage	$V_{EBO}$		5	V
Collector Current	$I_C$		3	mA
Collector Current (Pulse)	$I_{CP}$		10	mA
Collector Dissipation	$P_C$		1.75	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=1800\text{V}$ , $I_E=0$			1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}$ , $I_C=0$			1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}$ , $I_C=100\mu\text{A}$	10		60	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}$ , $I_C=200\mu\text{A}$		6		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=200\mu\text{A}$ , $I_B=40\mu\text{A}$			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=200\mu\text{A}$ , $I_B=40\mu\text{A}$			2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$ , $I_E=0$	2000			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=100\mu\text{A}$ , $R_{BE}=\infty$	1800			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$ , $I_C=0$	5			V
Output Capacitance	$C_{ob}$	$V_{CB}=100\text{V}$ , $f=1\text{MHz}$		1.4		pF

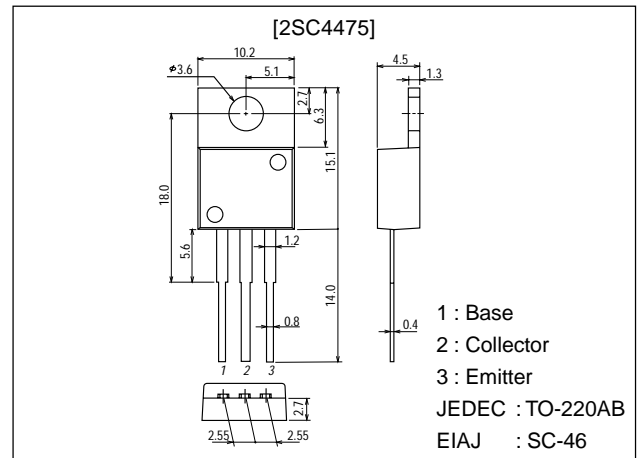
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### Package Dimensions

unit:mm

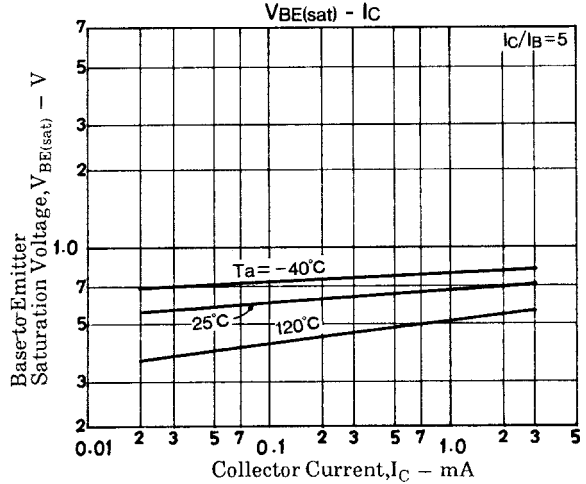
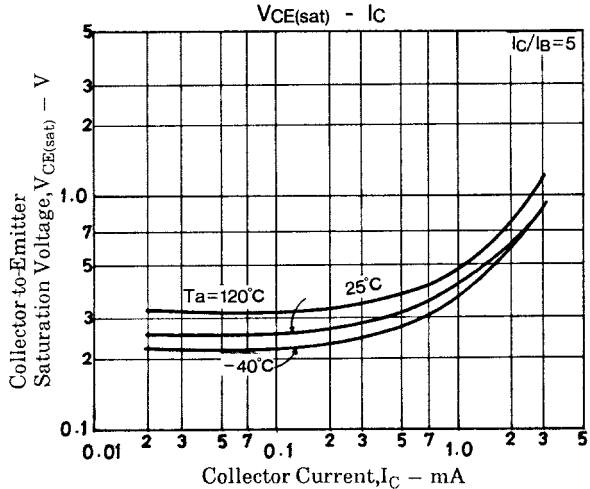
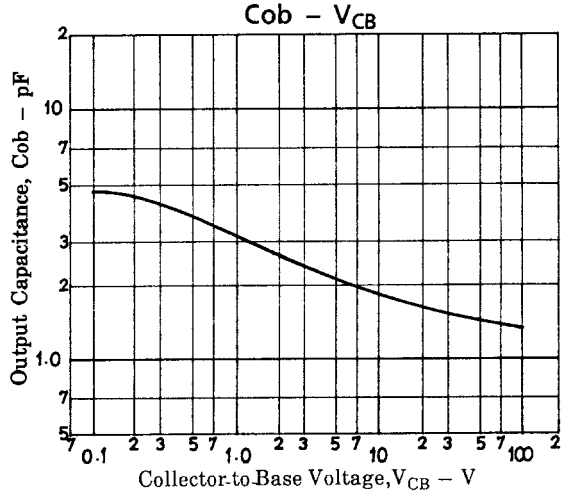
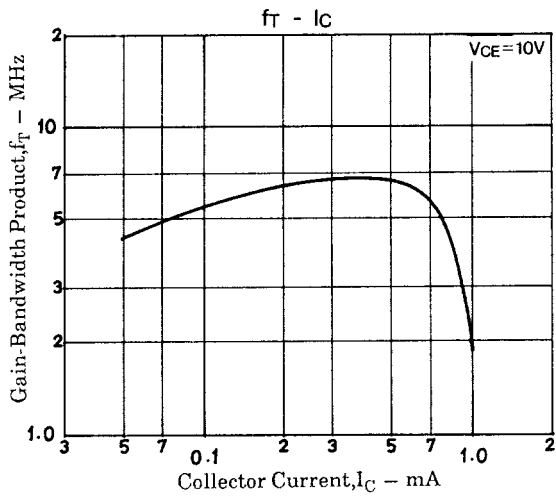
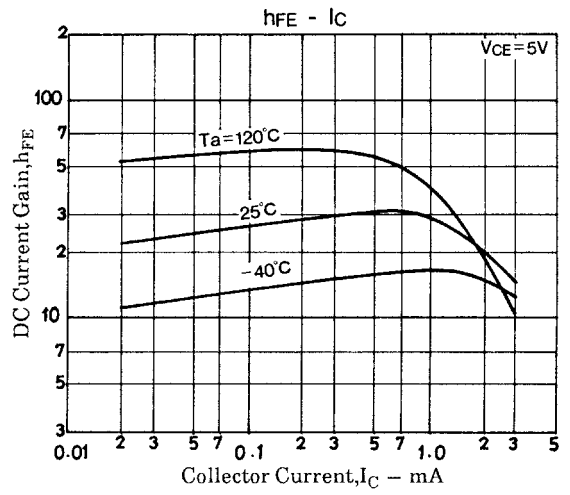
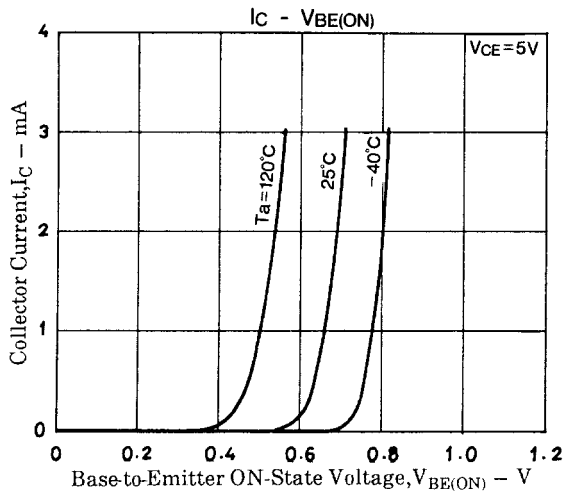
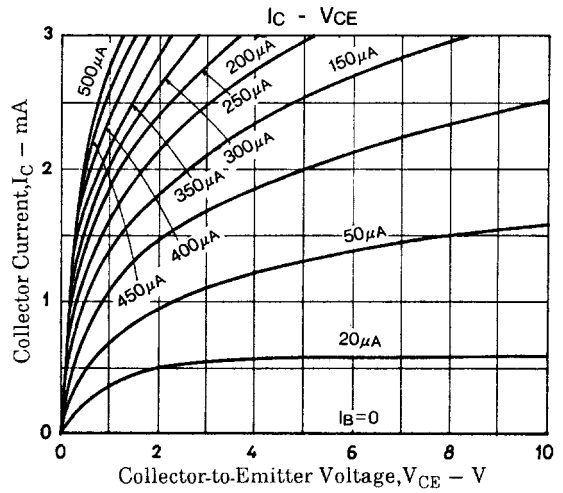
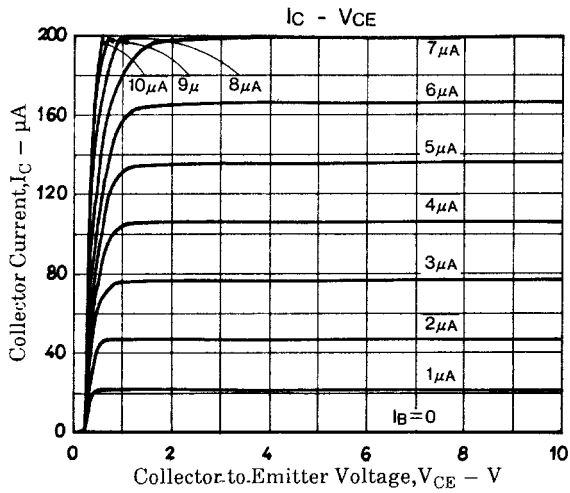
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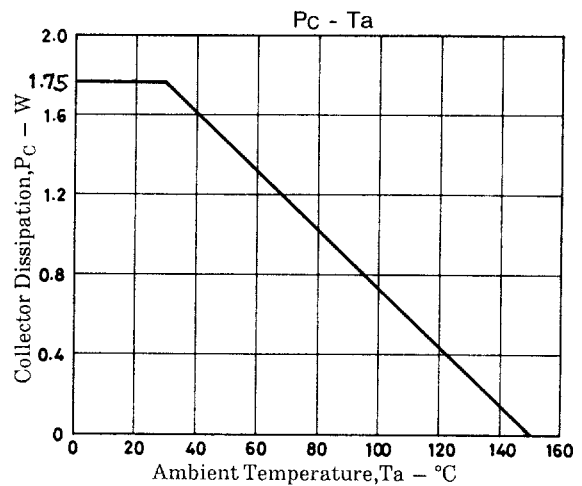
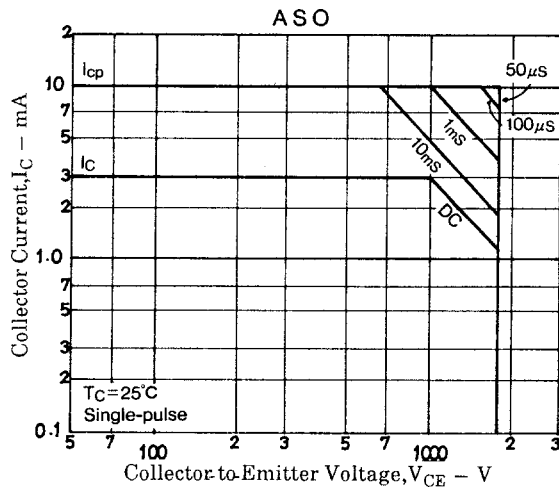
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