

### Absolute maximum ratings

( $T_a=25^\circ\text{C}$ )

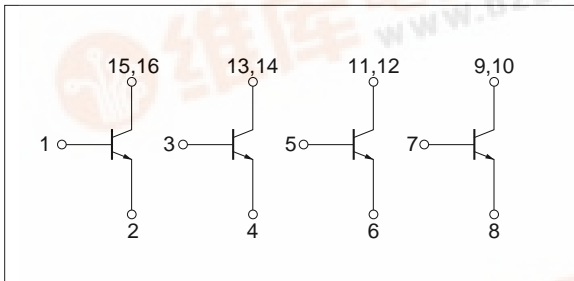
Symbol	Ratings	Unit
$V_{CBO}$	80	V
$V_{CEO}$	50	V
$V_{EBO}$	6	V
$I_c$	2	A
$I_{CP}$	3 ( $PW \leq 1\text{ms}$ , $D_u \leq 10\%$ )	A
$I_B$	0.5	A
$P_T$	3 ( $T_a=25^\circ\text{C}$ )	W
$T_j$	150	$^\circ\text{C}$
$T_{stg}$	-40 to +150	$^\circ\text{C}$
$\theta_{j-a}$	41.6	$^\circ\text{C/W}$

### Electrical characteristics

( $T_a=25^\circ\text{C}$ )

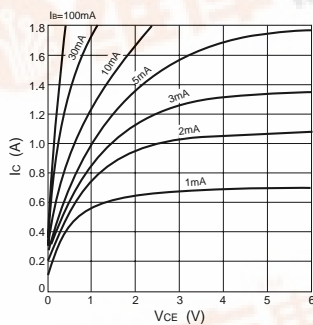
Symbol	Specification			Unit	Conditions
	min	typ	max		
$I_{CBO}$			10	$\mu\text{A}$	$V_{CB}=80\text{V}$
$I_{CES}$			100	$\mu\text{A}$	$V_{CE}=50\text{V}$
$I_{EBO}$			10	$\mu\text{A}$	$V_{EB}=6\text{V}$
$V_{CEO}$	50			V	$I_c=10\text{mA}$
$h_{FE}$	500		2000		$V_{CE}=4\text{V}$ , $I_c=0.5\text{A}$
$V_{CE(sat)}$			0.4	V	$I_c=0.5\text{A}$ , $I_b=5\text{mA}$
$V_{BE(sat)}$			1.1	V	
$f_T$		40		MHz	$V_{CE}=12\text{V}$ , $I_E=-0.1\text{A}$

### Equivalent circuit diagram

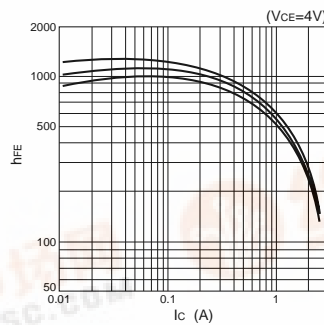


### Characteristic curves

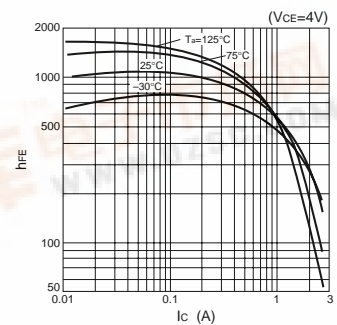
$I_c$ - $V_{CE}$  Characteristics (Typical)



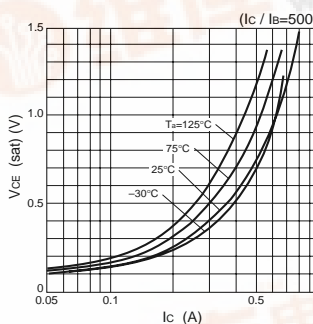
$h_{FE}$ - $I_c$  Characteristics (Typical)



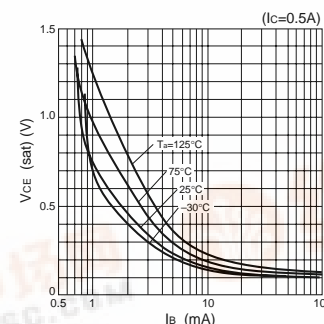
$h_{FE}$ - $I_c$  Temperature Characteristics (Typical)



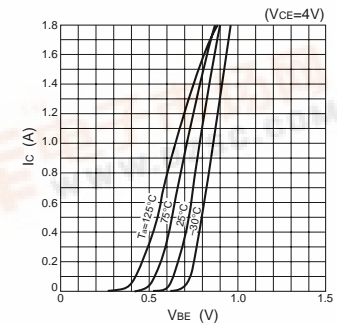
$V_{CE(sat)}$ - $I_c$  Temperature Characteristics (Typical)



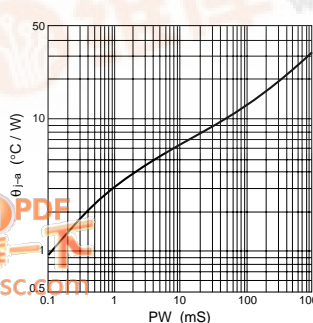
$V_{CE(sat)}$ - $I_b$  Temperature Characteristics (Typical)



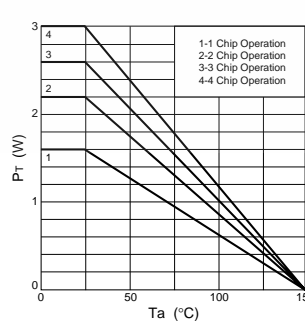
$I_c$ - $V_{BE}$  Temperature Characteristics (Typical)



$\theta_{j-a}$ -PW Characteristics



$P_T$ - $T_a$  Characteristics



Safe Operating Area (SOA)

