

Absolute maximum ratings

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

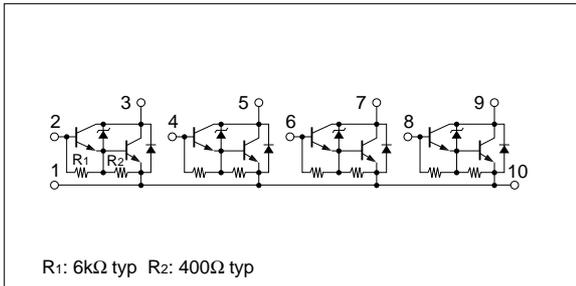
Symbol	Ratings	Unit
V_{CB0}	60 ± 10	V
V_{CE0}	60 ± 10	V
V_{EB0}	6	V
I_c	1	A
I_{CP}	2.5 (PW \leq 1ms, $D_u\leq$ 25%)	A
I_B	0.5	A
P_T	4 ($T_a=25^\circ\text{C}$)	W
	16 ($T_c=25^\circ\text{C}$)	
T_j	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$

Electrical characteristics

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

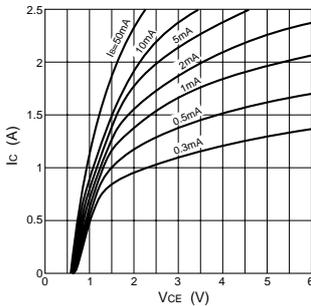
Symbol	Specification			Unit	Conditions
	min	typ	max		
I_{CB0}			10	μA	$V_{CB}=50\text{V}$
I_{EB0}			3	mA	$V_{EB}=6\text{V}$
V_{CE0}	50	60	70	V	$I_c=1\text{mA}$
h_{FE}	2000	5000	10000		$V_{CE}=4\text{V}$, $I_c=0.5\text{A}$
$V_{CE(sat)}$		1.0	1.5	V	$I_c=0.5\text{A}$, $I_B=1\text{mA}$
$V_{BE(sat)}$		1.6	2.2	V	
V_{FEC}		1.4	1.8	V	$I_{FEC}=0.5\text{A}$
t_{on}		0.5		μs	$V_{CC}\doteq 30\text{V}$, $I_c=0.5\text{A}$,
t_{stg}		2.5		μs	
t_f		1.0		μs	$I_{B1}=-I_{B2}=1\text{mA}$
f_T		50		MHz	$V_{CE}=12\text{V}$, $I_E=-0.1\text{A}$
C_{ob}		14		pF	$V_{CB}=10\text{V}$, $f=1\text{MHz}$

Equivalent circuit diagram

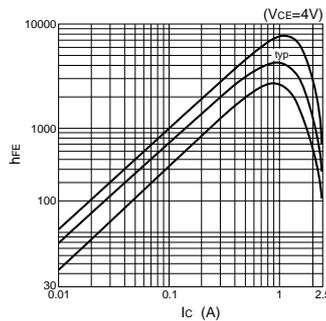


Characteristic curves

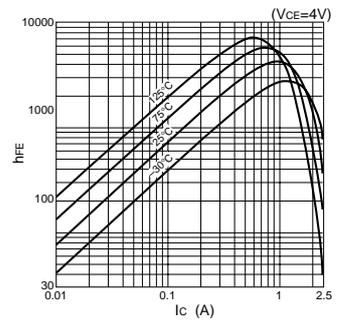
I_c - V_{CE} Characteristics (Typical)



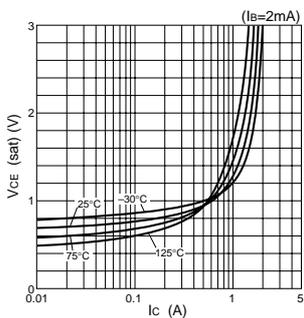
h_{FE} - I_c Characteristics (Typical)



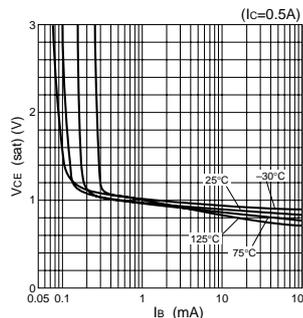
h_{FE} - I_c Temperature Characteristics (Typical)



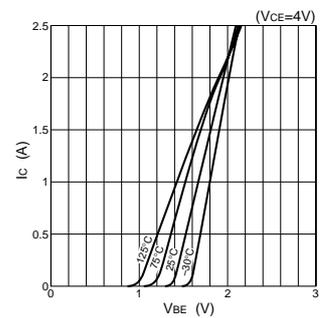
$V_{CE(sat)}$ - I_c Temperature Characteristics (Typical)



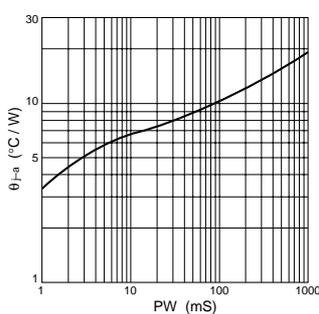
$V_{CE(sat)}$ - I_B Temperature Characteristics (Typical)



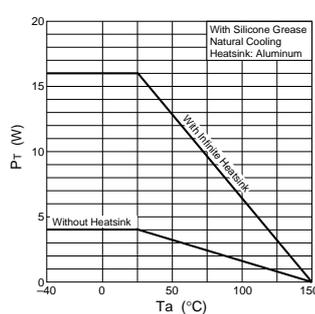
I_c - V_{BE} Temperature Characteristics (Typical)



θ_{j-a} -PW Characteristics



P_T - T_a Characteristics



Safe Operating Area (SOA)

