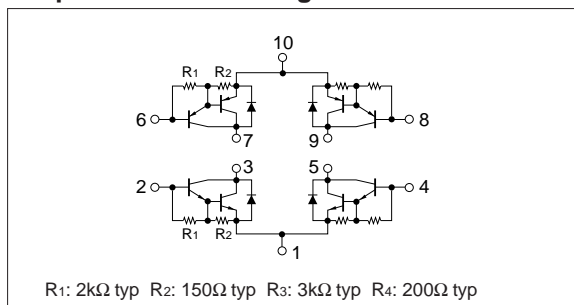


Absolute maximum ratings

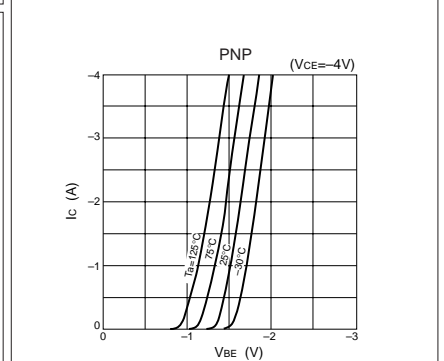
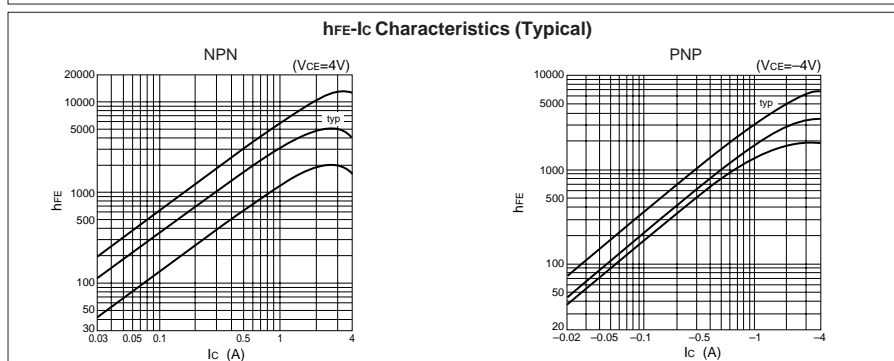
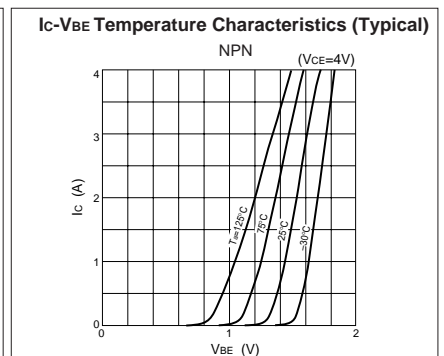
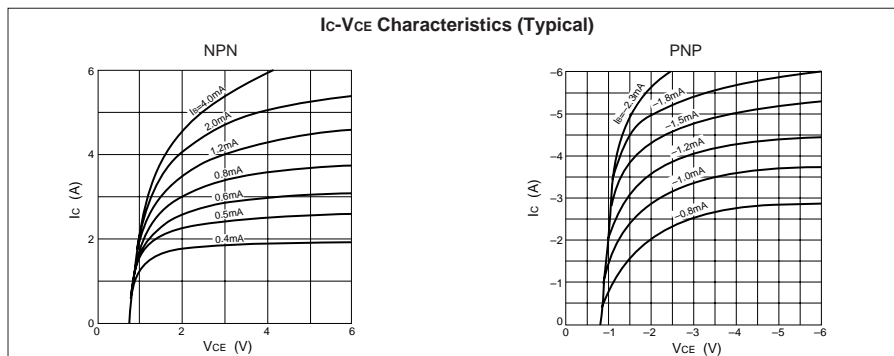
($T_a=25^\circ\text{C}$)

Symbol	Specification		Unit
	NPN	PNP	
V _{CBO}	80	−60	V
V _{CEO}	60	−60	V
V _{EBO}	6	−6	V
I _C	4	−4	A
I _{CP}	8 (PW≤10ms, Du≤50%)	−8 (PW≤10ms, Du≤50%)	A
P _T	4 (T _a =25°C)		W
	20 (T _c =25°C)		
T _j	150		°C
T _{stg}	−40 to +150		°C

Equivalent circuit diagram



Characteristic curves



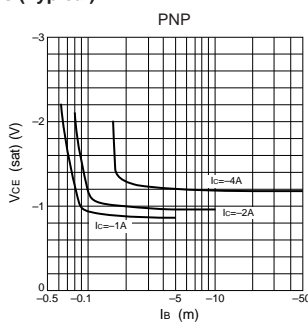
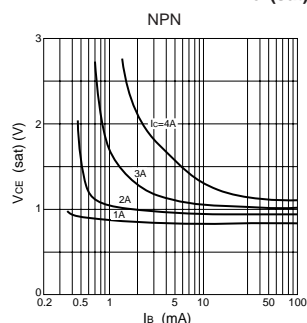
Electrical characteristics

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

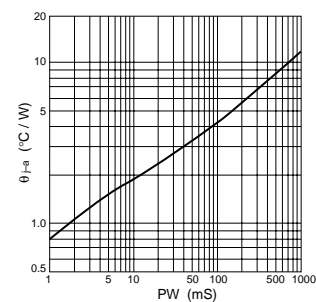
Symbol	NPN					PNP				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
I_{CBO}			100	μA	$V_{CB}=80\text{V}$			-100	μA	$V_{CB}=-60\text{V}$
I_{EBO}			10	mA	$V_{EB}=6\text{V}$			-10	mA	$V_{EB}=-6\text{V}$
V_{CEO}	60			V	$I_C=10\text{mA}$	-60			V	$I_C=-10\text{mA}$
h_{FE}	1000				$V_{CE}=4\text{V}, I_C=3\text{A}$	1000				$V_{CE}=-4\text{V}, I_C=-3\text{A}$
$V_{CE(sat)}$			2.0	V	$I_C=3\text{A}, I_B=10\text{mA}$			-2.0	V	$I_C=-2\text{A}, I_B=-10\text{mA}$
t_{on}		1.0		μs	$V_{CC}\div 30\text{V},$ $I_C=3\text{A},$ $I_{B1}=-I_{B2}=10\text{mA}$		0.4		μs	$V_{CC}\div 30\text{V},$ $I_C=-3\text{A},$ $I_{B1}=-I_{B2}=-10\text{mA}$
t_{stg}		4.0		μs			0.8		μs	
t_f		1.5		μs			0.6		μs	

Characteristic curves

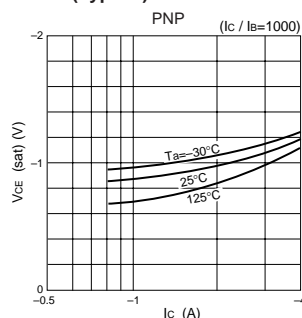
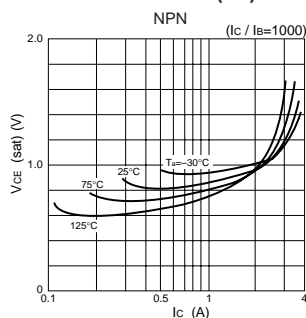
$V_{CE(sat)}$ - I_B Characteristics (Typical)



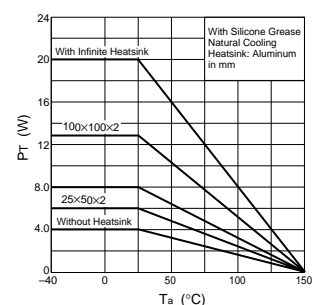
θ_{JA} -PW Characteristics



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



P_T - T_a Characteristics



Safe Operating Area (SOA)

