

SEMICONDUCTOR TM

KSE13006/13007

High Voltage Switch Mode Application

High Speed Switching

• Suitable for Switching Regulator and Motor Control



KSE13006/13007

1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings $T_{C}=25^{\circ}C$ unless otherwise noted

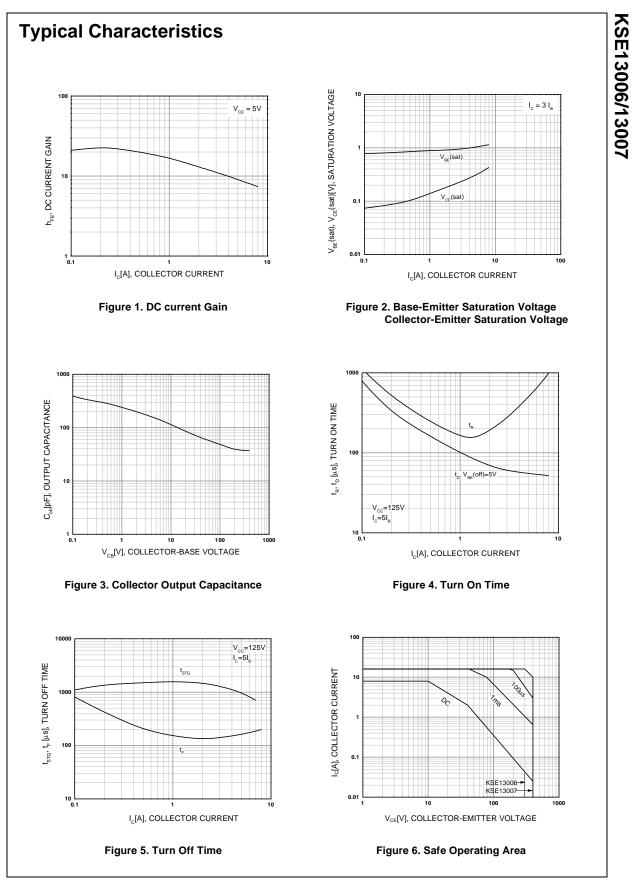
Symbol	Parameter		Value	Units	
V _{CBO}	Collector-Base Voltage	: KSE13006	600	V	
		: KSE13007	700	V	
V _{CEO}	Collector-Emitter Voltage	: KSE13006	300	V	
		: KSE13007	400	V	
V _{EBO}	Emitter- Base Voltage		9	V	
I _C	Collector Current (DC)		8	А	
I _{CP}	Collector Current (Pulse)		16	A	
I _B	Base Current		4	A	
P _C	Collector Dissipation (T _C =25°C)		80	W	
TJ	Junction Temperature		150	°C	
T _{STG}	Storage Temperature		- 65 ~ 150	°C	

Electrical Characteristics $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CEO}	Collector- Emitter Breakdown Voltage : KSE13006 : KSE13007	I _C = 10mA, I _B = 0	300 400			V V
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 9V, I_{C} = 0$			1	mA
h _{FE}	*DC Current Gain	$V_{CE} = 5V, I_C = 2A$ $V_{CE} = 5V, I_C = 5A$	8 5		60 30	
V _{CE} (sat)	*Collector-Emitter Saturation Voltage	$I_{C} = 2A, I_{B} = 0.4A$ $I_{C} = 5A, I_{B} = 1A$ $I_{C} = 8A, I_{B} = 2A$			1 2 3	V V V
V _{BE} (sat)	*Base-Emitter Saturation Voltage	$I_{C} = 2A, I_{B} = 0.4A$ $I_{C} = 5A, I_{B} = 1A$			1.2 1.6	V V
C _{ob}	Output Capacitance	V _{CB} = 10V, f = 0.1MHz		110		pF
f _T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_{C} = 0.5A$	4			MHz
t _{ON}	Turn On Time	$V_{CC} = 125V, I_{C} = 5A$			1.6	μs
t _{STG}	Storage Time	$I_{B1} = -I_{B2} = 1A$			3	μs
t _F	Fall Time	$R_L = 50\Omega$			0.7	μs

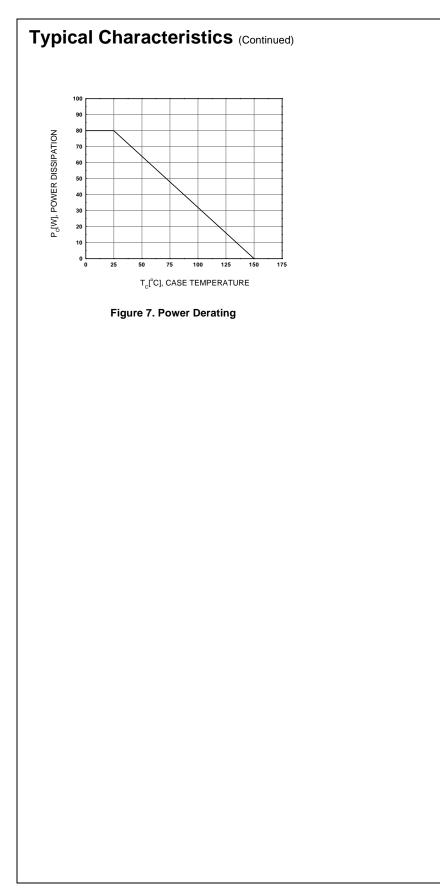
* Pulse test: PW≤300µs, Duty cycle≤2%

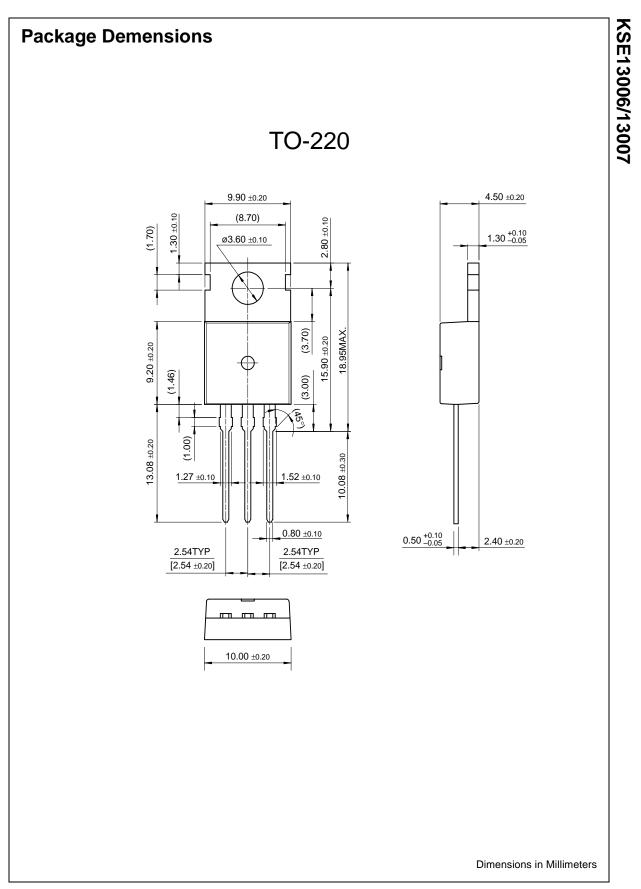
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