

KSE13004/13005

High Voltage Switch Mode Application

- High Speed Switching
- Suitable for Switching Regulator and Motor Control



1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

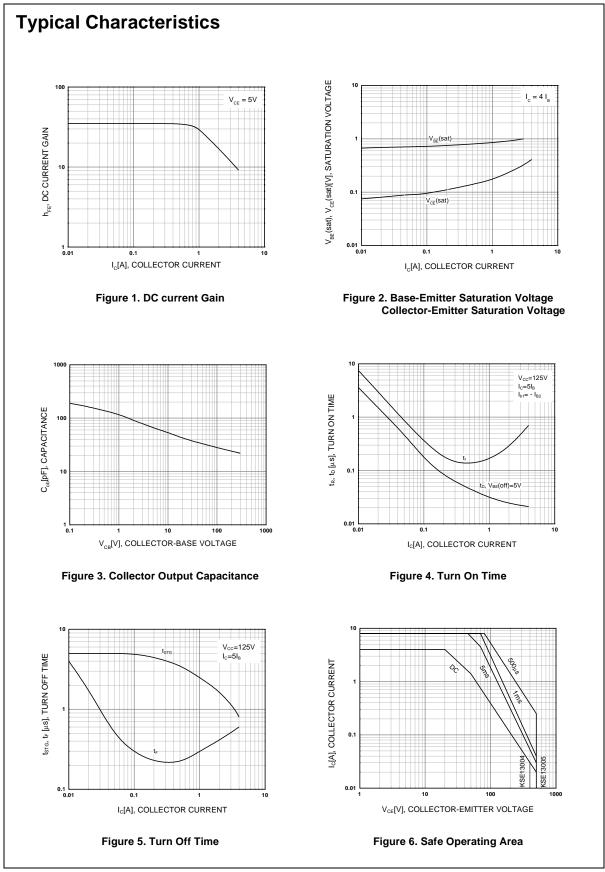
Symbol	Parameter		Value	Units
V _{CBO}	Collector-Base Voltage	: KSE13004	600	V
		: KSE13005	700	V
V _{CEO}	Collector-Emitter Voltage	: KSE13004	300	V
		: KSE13005	400	V
V _{EBO}	Emitter-Base Voltage		9	V
I _C	Collector Current (DC)		4	А
I _{CP}	Collector Current (Pulse)		8	А
I _B	Base Current		2	А
P _C	Collector Dissipation (T _C =25°C)		75	W
T _J	Junction Temperature		150	°C
T _{STG}	Storage Temperature		- 65 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CEO} (sus)	Collector-Emitter Sustaining Voltage : KSE13004 : KSE13005	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	$V_{CE} = 5V, I_{C} = 1A$ $V_{CE} = 5V, I_{C} = 2A$	10 8		60 40	
V _{CE} (sat)	*Collector-Emitter Saturation Voltage	$I_C = 1A, I_B = 0.2A$ $I_C = 2A, I_B = 0.5A$ $I_C = 4A, I_B = 1A$			0.5 0.6 1	V V V
V _{BE} (sat)	*Base-Emitter Saturation Voltage	$I_C = 1A, I_B = 0.2A$ $I_C = 2A, I_B = 0.5A$			1.2 1.6	V
C _{ob}	Output Capacitance	$V_{CB} = 10V, f = 0.1MHz$		65		pF
f _T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_{C} = 0.5A$	4			MHz
t _{ON}	Turn On Time	$V_{CC} = 125V, I_{C} = 2A$			0.8	μs
t _{STG}	Storage Time	$I_{B1} = -I_{B2} = 0.4A$			4	μs
t _F	Fall Time	$R_L = 62.5\Omega$			0.9	μs

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

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Typical Characteristics (Continued)

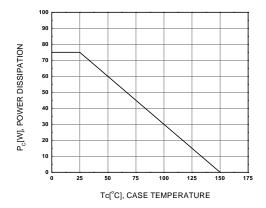
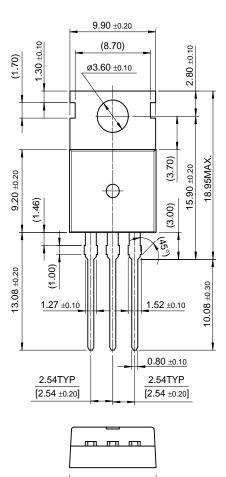


Figure 7. Power Derating

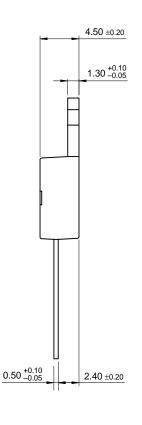
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Package Demensions

TO-220



10.00 ±0.20



Dimensions in Millimeters

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