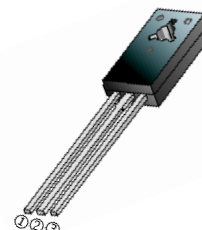


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Collector-Emitter Saturation Voltage
- Large Collector Current
- High Power Dissipation: $P_C=1.3W$ ($T_A=25^\circ C$)

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MARKING



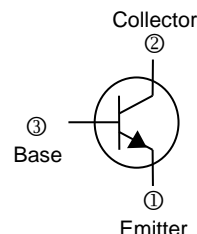
CLASSIFICATION OF h_{FE}

Product-Rank	KSD1691-O	KSD1691-Y
Range	100~200	160~320

ORDER INFORMATION

Part Number	Type
KSD1691-□	Lead (Pb)-free
KSD1691-□-C	Lead (Pb)-free and Halogen-free

*□ = h_{FE} Rank



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ C$ unless otherwise specified)

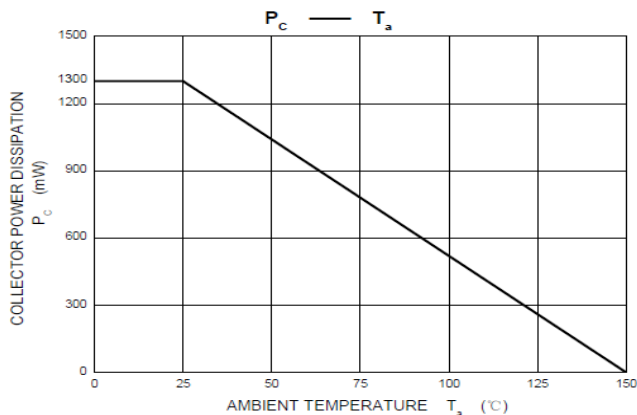
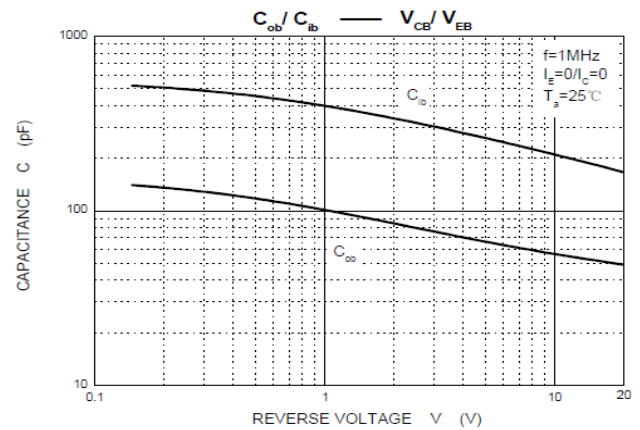
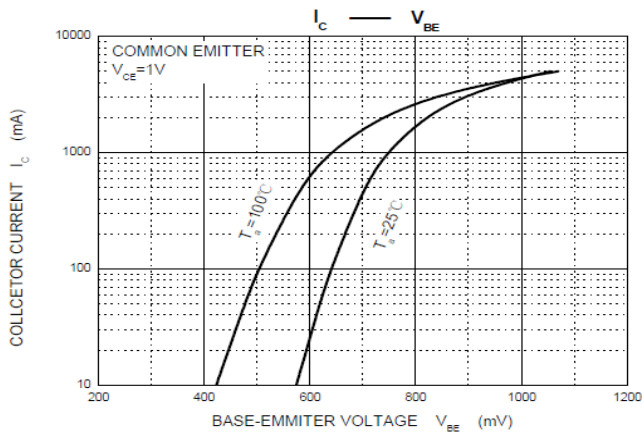
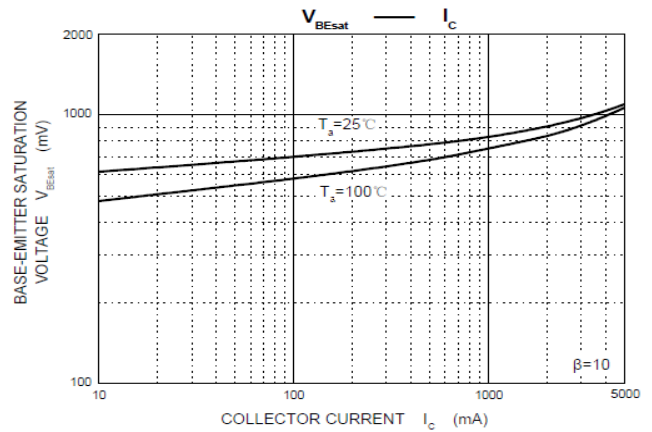
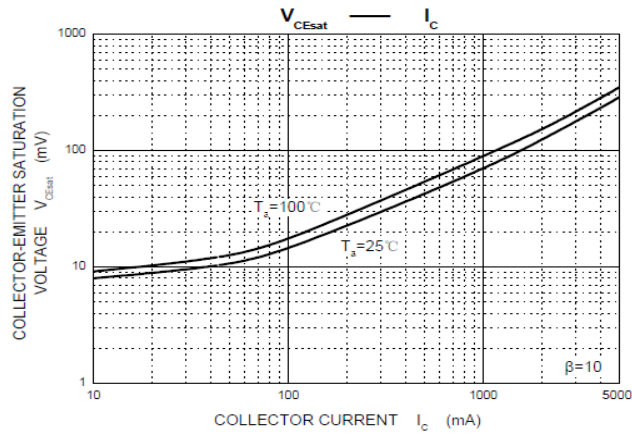
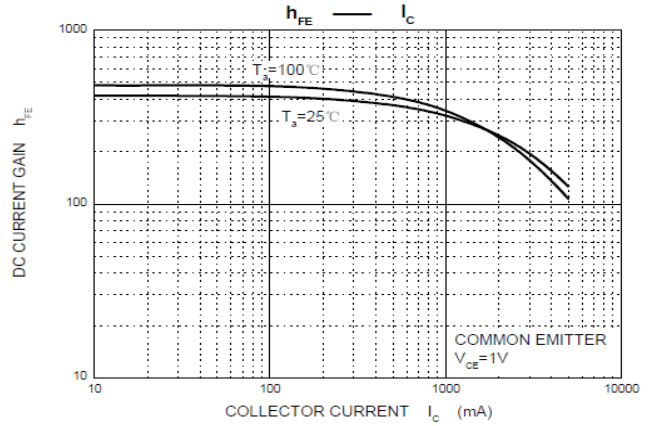
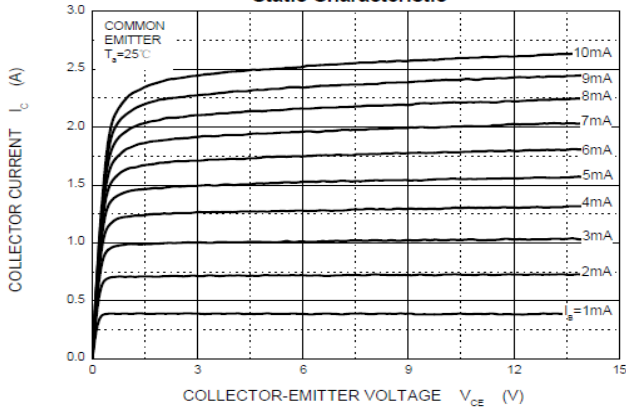
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current-Continuous	I_C	5	A
Collector Power Dissipation	$T_A=25^\circ C$	1.3	W
	$T_C=25^\circ C$	20	
Operating Junction, Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60	-	-	V	$I_C=100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60	-	-	V	$I_C=1mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	7	-	-	V	$I_E=100\mu A, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	10	μA	$V_{CB}=50V, I_E=0$
Emitter Cut-off Current	I_{EBO}	-	-	10	μA	$V_{EB}=7V, I_C=0$
DC Current Gain	h_{FE}	60	-	-		$V_{CE}=1V, I_C=0.1A$
		100	-	320		$V_{CE}=1V, I_C=2A$
		50	-	-		$V_{CE}=1V, I_C=5A$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C=2A, I_B=0.2A$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.2	V	$I_C=2A, I_B=0.2A$
Turn-on Time	t_{on}	-	-	1	μS	$V_{CC}=10V, I_C=2A, I_{B1}=-I_{B2}=0.2A, R_L=5\Omega$
Storage Time	t_{stg}	-	-	2.5		
Fall Time	t_f	-	-	1		

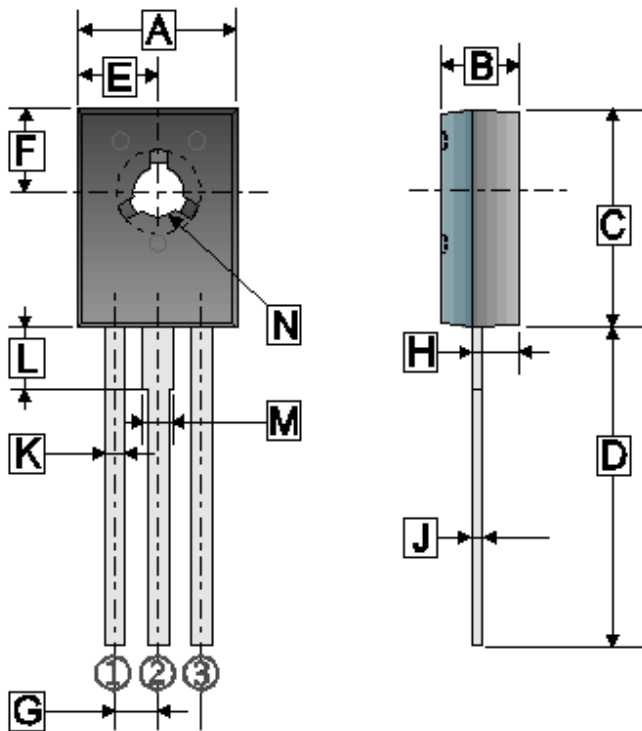
CHARACTERISTIC CURVES

Static Characteristic



PACKAGE OUTLINE DIMENSIONS

TO-18



REF.	Millimeter	
	Min.	Max.
A	7.40	7.80
B	2.50	2.90
C	10.60	11.00
D	15.30	15.70
E	3.70	3.90
F	3.90	4.10
G	2.29 TYP.	
H	1.10	1.50
J	0.45	0.60
K	0.66	0.86
L	2.10	2.30
M	1.17	1.37
N	3.00	3.20