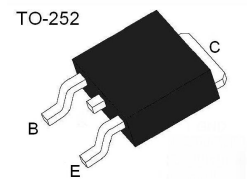
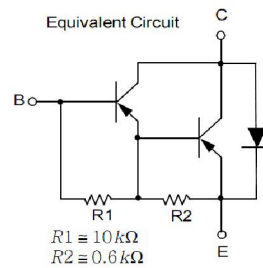


## FEATURES

- Complementary to MJD112



LOGO **GK** XXX CODE



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

### Absolute Maximum Ratings

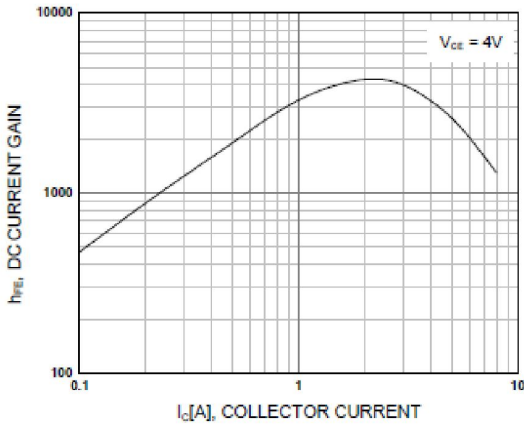
Parameter	Symbol	Value	Unit	
Collector-Base Voltage	$V_{CBO}$	-100	V	
Collector-Emitter Voltage	$V_{CEO}$	-100	V	
Emitter-Base Voltage	$V_{EBO}$	-5	V	
Collector Current(DC)	$I_C$	-3	A	
Collector Dissipation	$P_C$	$T_c = 25\text{ }^\circ\text{C}$	20	W
		$T_a = 25\text{ }^\circ\text{C}$	1.75	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Storage Temperature	$T_{stg}$	-65~150	$^\circ\text{C}$	

**ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise specified)**

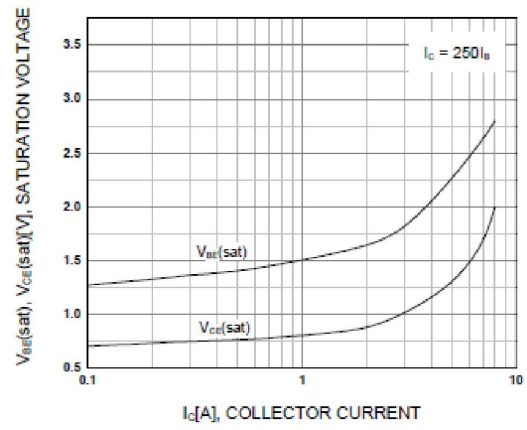
Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = -30mA, I_B = 0$	-100			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -100V, I_E = 0$			-0.2	mA
Collector cut-off current	$I_{CEO}$	$V_{CE} = -50V, I_E = 0$			-0.5	mA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-0.2	mA
* DC current gain	$h_{FE}$	$V_{CE} = -3V, I_C = -0.5A$ $V_{CE} = -3V, I_C = -3A$	1000 1000			
*Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -12mA$ $I_C = -5A, I_B = -20mA$			-2 -4	V
* Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = -3V, I_C = -3A$			-2.5	V
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 0.1MHz$			100	pF

\* Pulse Test :  $PW \leq 300\mu s, Duty\ cycle \leq 2\%$

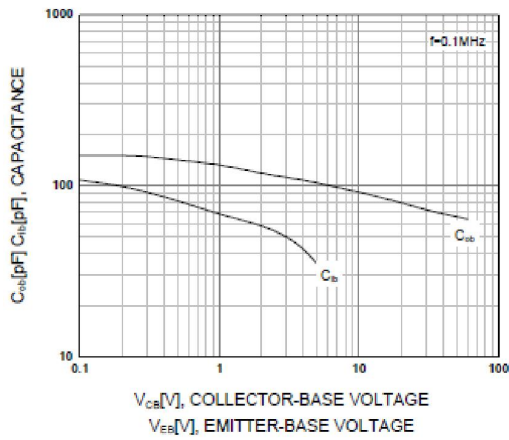
**RATING AND CHARACTERISTIC CURVES**



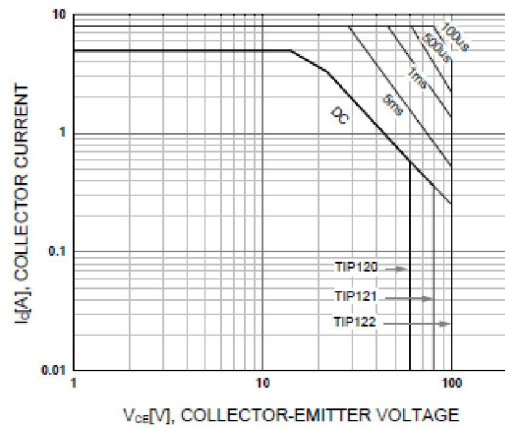
**Figure 1. DC current Gain**



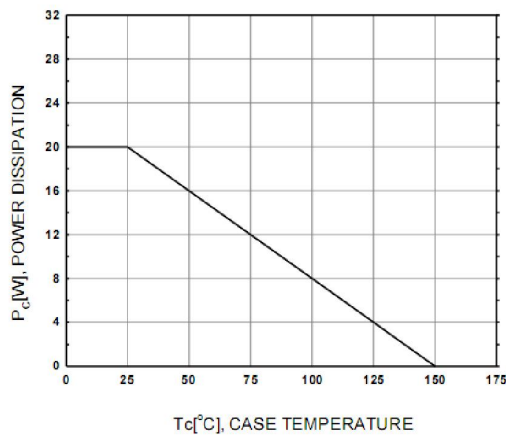
**Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Figure 3. Output and Input Capacitance  
vs. Reverse Voltage**



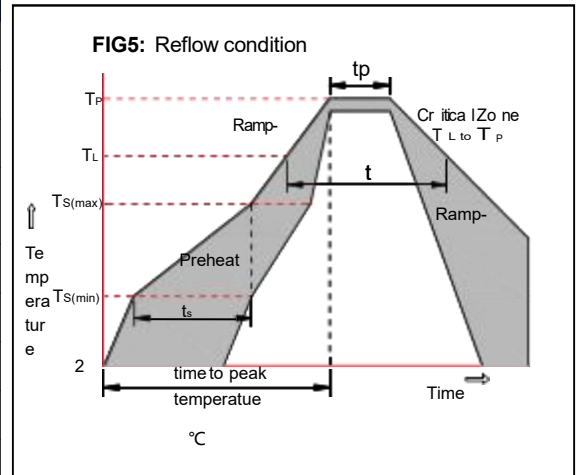
**Figure 4. Safe Operating Area**



**Figure 5. Power Derating**

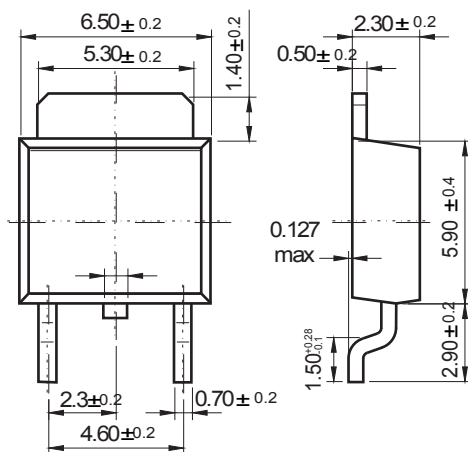
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150 °C
	-Temperature Max ( $T_{s(max)}$ )	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3 °C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature ( $T_L$ ) (Liquid us)	+217 °C
	-Temperature ( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260 °C

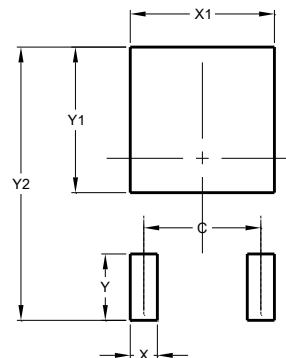


Package Dimensions & Suggested Pad Layout

TO-252



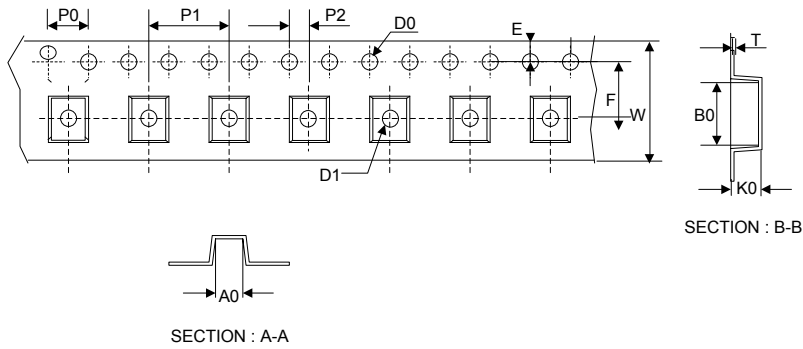
Dimensions in inches and (millimeters)



Dimensions	Value (in mm)
C	4.55
X	1.50
X1	5.80
Y	2.70
Y1	6.00
Y2	10.90

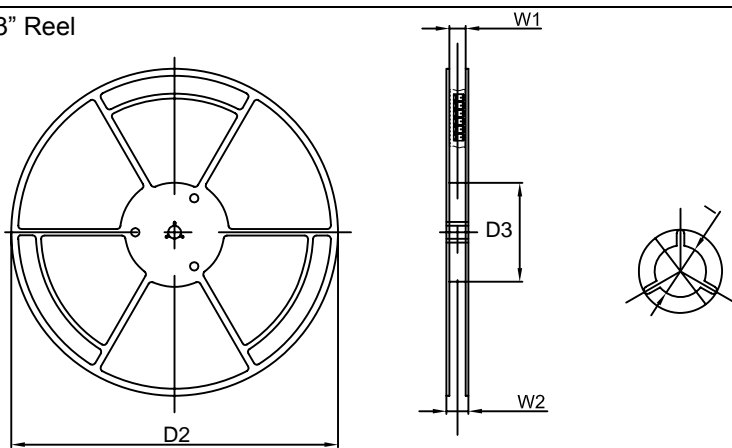
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.55±0.15
D1	1.55±0.20
E	1.75±0.20
F	7.50±0.20
W	16.00±0.20
A0	7.10±0.20
B0	10.50±0.20
K0	2.70±0.20
T	0.30±0.10
D2	330.0±5.0
D3	100.0±4.0
W1	20.0±5.0
W2	25.0±5.0
I	13.0±2.0

13" Reel



Quantity: 2500PCS