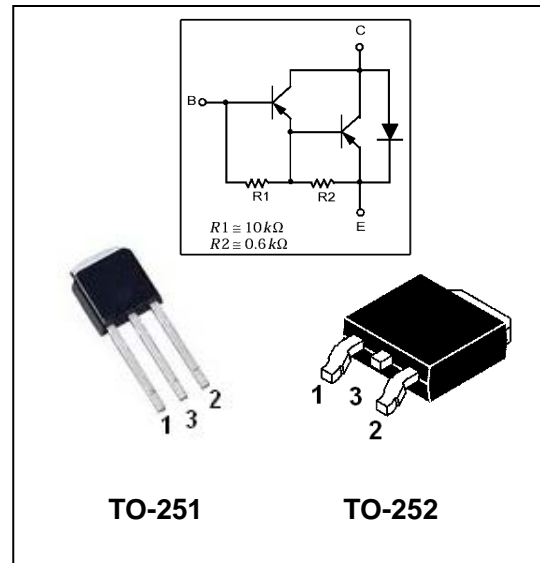




### FEATURES

- High DC Current Gain.
- Built-in a Damper Diode at E-C.
- Lead Formed for Surface Mount Applications.
- Straight Lead.
- MSL 3.



### Ordering Information

Part Number	Package	Shipping	Marking Code
MJD117	TO-251	80 pcs / Tube	MJD117
	TO-252	80 pcs / Tube or 2500 pcs / Tape & Reel	

### MAXIMUM RATING operating temperature range applies unless otherwise specified

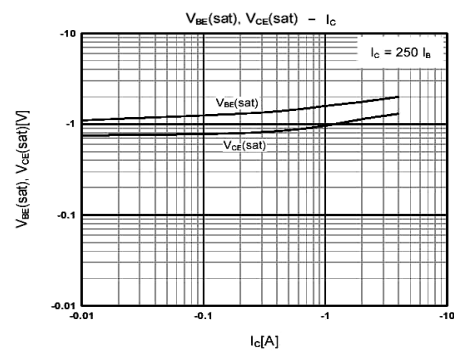
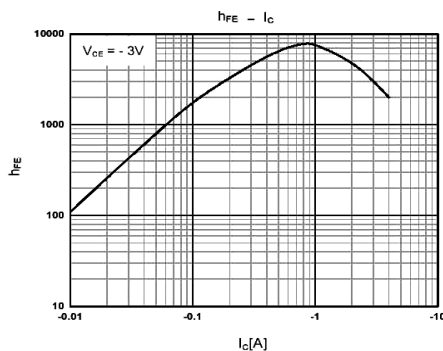
Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-100	V
$V_{CEO}$	Collector-Emitter Voltage	-100	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-2	A
$I_{CM}$	Peak Collector Current	-4	A
$I_B$	Base Current	-50	mA
$P_C$	Collector Power Dissipation	1.5	W
$T_J, T_{STG}$	Junction and Storage temperature range	-65 to +150	°C



### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

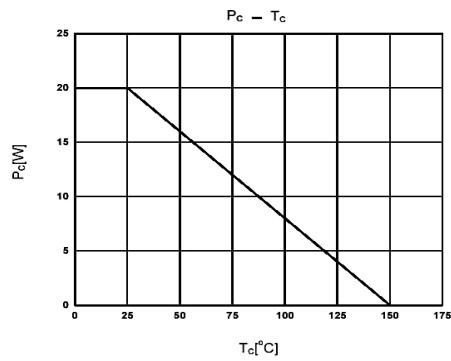
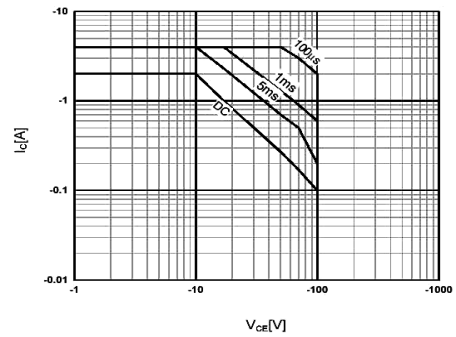
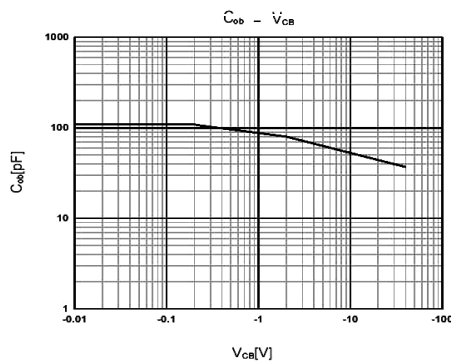
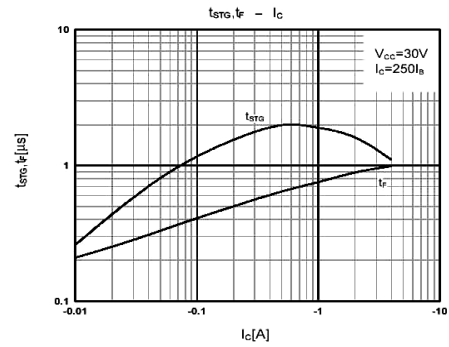
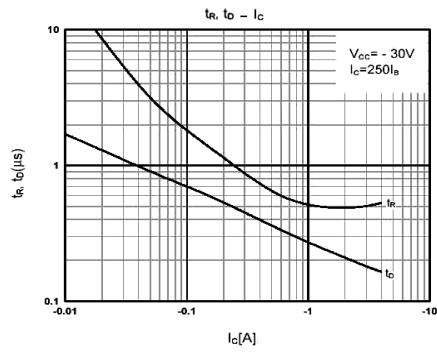
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-emitter sustaining voltage	$V_{CEO(SUS)}$	$I_C=-30mA, I_B=0$	-100			V
Collector cut-off current	$I_{CEO}$	$V_{CE}=-50V, I_B=0$			-20	$\mu A$
Collector cut-off current	$I_{CBO}$	$V_{CB}=-100V, I_E=0$			-20	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-5V, I_C=0$			-2	mA
DC current gain	$h_{FE}$	$V_{CE}=-3V, I_C=-0.5A$ $V_{CE}=-3V, I_C=-2A$ $V_{CE}=-3V, I_C=-4A$	500 1000 200		12K	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-2A, I_B=-8mA$ $I_C=-4A, I_B=-40mA$			-2 -3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-4A, I_B=-40mA$			-4	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE}=-3V, I_C=-2A$			-2.8	V
Transition frequency	$f_T$	$V_{CE}=-10V, I_C=-0.75A$	25			MHz
Output capacity	$C_{ob}$	$V_{CB}=-10V, I_E=0, f=0.1MHz$			200	pF

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified





### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

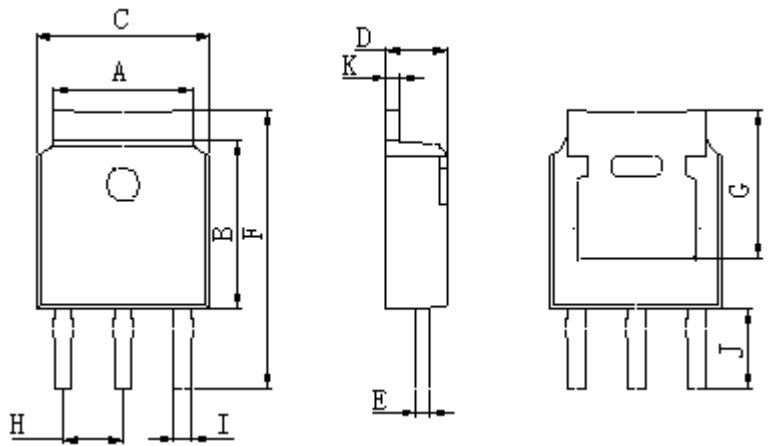




### PACKAGE OUTLINE

Plastic surface mounted package

TO-251

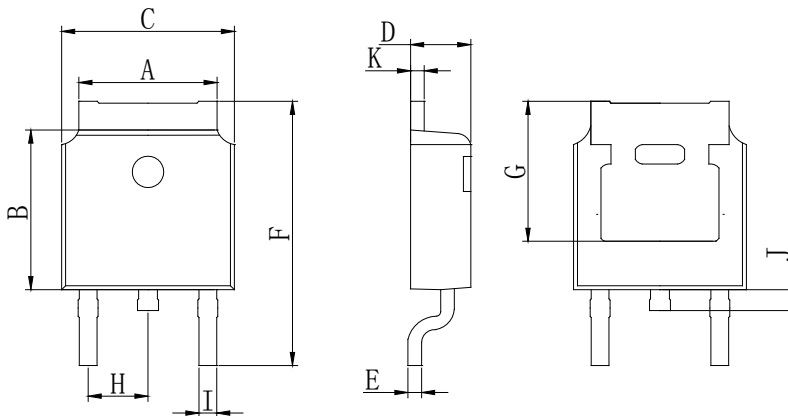


TO-251		
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	12.00	12.60
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	4.90	5.50
K	0.40	0.60
All Dimensions in mm		

### PACKAGE OUTLINE

Plastic surface mounted package

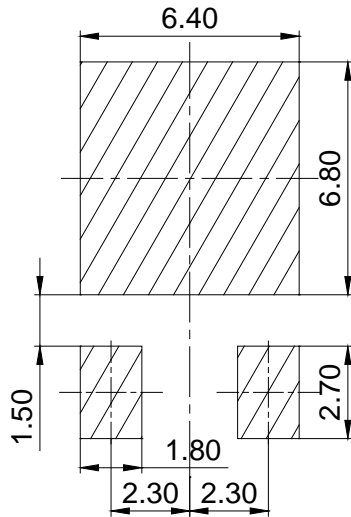
TO-252



TO-252		
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	9.71	10.31
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	0.50	0.70
K	0.40	0.60
All Dimensions in mm		



### SOLDERING FOOTPRINT



Unit: mm

Package	Packing	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton Size L×W×H(mm)	Quantity(pcs/carton)
TO-252	80pcs/Tube	560×150×50	4000	570×290×180	40000
TO-252	2500pcs/Reel	335×335×40	2500	370×370×440	12500/25000

Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-251	Bulk	500pcs/Bag	5000pcs	245×170×100	50,000pcs	525×375×270
TO-251	Tube	80pcs/Tube	4000pcs	560×178×35	40,000pcs	585×385×220