

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

## FEATURES

- Low  $V_{CE(sat)}$ .  $V_{CE(sat)} = 0.25V(Typ.) (I_C/I_B = 4A / 0.1A)$
- Excellent DC Current Gain Characteristics

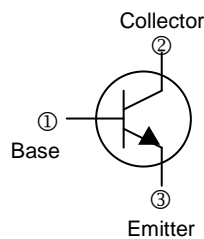
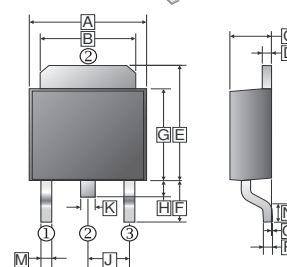
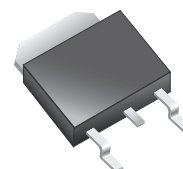
## CLASSIFICATION OF $h_{FE}$

Product-Rank	2SD2118-Q	2SD2118-R
Range	120~270	180~390

## PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

## D-Pack (TO-252)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.35	6.8	J	2.30	REF.
B	5.20	5.50	K	0.64	0.90
C	2.15	2.40	M	0.50	1.1
D	0.45	0.58	N	0.9	1.65
E	6.8	7.5	O	0	0.15
F	2.40	3.0	P	0.43	0.58
G	5.40	6.25			
H	0.64	1.20			

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

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CB0}$	50	V
Collector to Emitter Voltage	$V_{CEO}$	20	V
Emitter to Base Voltage	$V_{EBO}$	6	V
Collector Current -Continuous	$I_C$	5	A
Collector Power Dissipation	$P_C$	1	W
Junction and Storage Temperature Range	$T_J, T_{STG}$	150, -55~150	$^\circ C$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CB0}$	50	-	-	V	$I_C=50\mu A, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	20	-	-	V	$I_C=1mA, I_B=0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=50\mu A, I_C=0$
Collector cut-off current	$I_{CBO}$	-	-	0.5	$\mu A$	$V_{CB}=40V, I_E=0$
Emitter cut-off current	$I_{EBO}$	-	-	0.5	$\mu A$	$V_{EB}=5V, I_C=0$
DC current gain	$h_{FE}$	120	-	390		$V_{CE}=2V, I_C=500mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	1	V	$I_C=4A, I_B=100mA$
Transition frequency	$f_T$	-	150	-	MHz	$V_{CE}=6V, I_C=50mA, f=100MHz$
Collector Output Capacitance	$C_{OB}$	-	30	-	pF	$V_{CB}=20V, I_E=0, f=1MHz$