

**/ Descriptions**

KF \$) )' = E GE ` Silicon NPN transistor in a TO-220F Plastic Package.

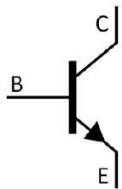
**/ Features**

# # )J9(, --  
Low  $V_{CE(sat)}$ , wide SOA, complements the 2SB1566.

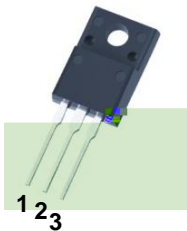
**/ Applications**

#  
Voltage regulator, DC-DC converter and relay driver audio frequency power Amplifier.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base      PIN 2 Collector      PIN 3 Emitter

**/  $h_{FE}$  Classifications & Marking**

$h_{FE}$ Classifications Symbol	E	F
$h_{FE}$ Range	100 200	160 320

**/ Absolute Maximum Ratings(Ta=25 )**

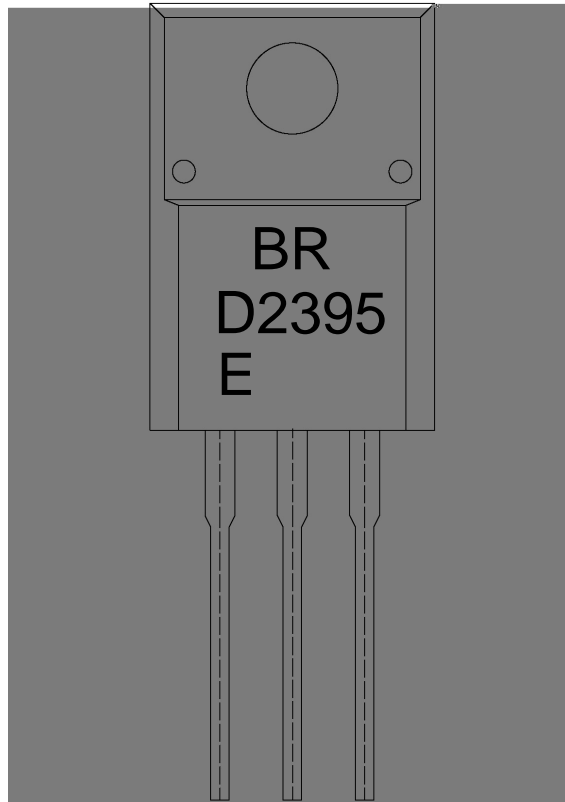
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current - Continuous	$I_C$	3.0	A
Collector Power Dissipation	$P_C$	2.0	W
Collector Power Dissipation	$P_C(T_C=25 )$	25	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=50\mu A$	60			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0mA$	50			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=50\mu A$	5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=40V \quad I_E=0$			1.0	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=4.0V \quad I_C=0$			1.0	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=5.0V \quad I_C=500mA$	100		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A \quad I_B=0.2A$			1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A \quad I_B=0.2A$			1.5	V
Transition Frequency	$f_T$	$V_{CE}=5.0V \quad I_C=500mA$		100		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V \quad I_E=0$ $f=1.0MHz$		35		pF



/ Marking Instructions



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Note:

BR: Company Code.

D2395: Product Type.

E:  $h_{FE}$  Classifications Symbol

\*\*\*\*: Lot No. Code, code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |        |     |            |        |   |
|---|--------|-----|------------|--------|---|
| 1 | 25     | 150 | 60         | 90sec; | 1.Preheating:25~150 , Time:60~90sec.      |
| 2 | 255..5 |     | 5..0.5sec; |        | 2.Peak Temp.:255..5 , Duration:5..0.5sec. |
| 3 |        | 2   | 10         | /sec.  | 3. Cooling Speed: 2~10 /sec.              |

/ Resistance to Soldering Heat Test Conditions

270..5                      10..1 sec.                      Temp.:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units				Dimension			(unit mm <sup>3</sup> )