

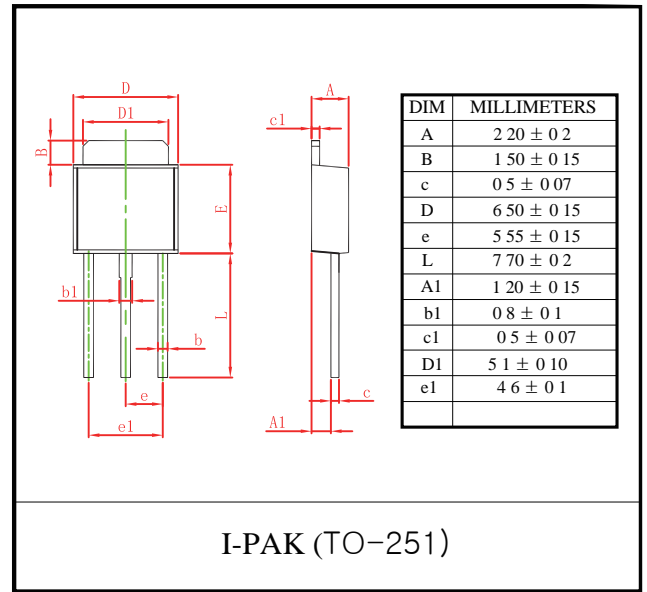
### FTD1899I TRANSISTOR (NPN)

#### FEATURES

- High  $h_{FE}$   $h_{FE}=100$  to  $400$
- Low  $V_{CE(sat)}$   $V_{CE(sat)} = 0.25V$

#### MAXIMUM RATINGS ( $T_a=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current -Continuous	3	A
$P_C$	Collector Power Dissipation	1	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55-150	$^\circ C$



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	7			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7V, I_C=0$			10	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=2V, I_C=200mA$	60			
	$h_{FE(2)}$	$V_{CE}=2V, I_C=600mA$	100		400	
	$h_{FE(3)}$	$V_{CE}=2V, I_C=2A$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1.5A, I_B=150mA$			0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1.5A, I_B=150mA$			1.2	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=1.5A$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		30		pF
Switching Time	Turn on Time	$t_{on}$			0.5	$\mu s$
	Storage Time	$t_{stg}$	$V_{CC}=10V, I_C=1A, I_{B1}=-I_{B2}=-0.1A$		2.0	
	Fall Time	$t_f$			0.5	

#### CLASSIFICATION OF $h_{FE(2)}$

Rank	M	L	K
Range	100-200	160-320	200-400

# Typical Characteristics

