

HIGH VOLTAGE APPLICATION.  
TELEPHONE APPLICATION.

### FEATURES

- Complementary to MPSA92/93.

### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	MPSA42	$V_{CBO}$	300	V
	MPSA43		200	
Collector-Emitter Voltage	MPSA42	$V_{CEO}$	300	V
	MPSA43		200	
Emitter-Base Voltage		$V_{EBO}$	6.0	V
Collector Current		$I_C$	500	mA
Emitter Current		$I_E$	-500	mA
Collector Power Dissipation		$P_C$	625	mW
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C



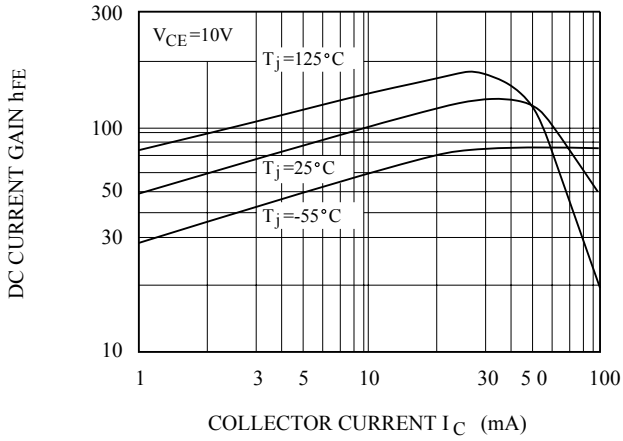
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	MPSA42	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	300	-	-	V
	MPSA43			200	-	-	
Collector-Emitter Breakdown Voltage	MPSA42	$V_{(BR)CEO}$	$I_C=1.0mA, I_B=0$	300	-	-	V
	MPSA43			200	-	-	
Collector Cut-off Current	MPSA42	$I_{CBO}$	$V_{CB}=200V, I_E=0$	-	-	0.1	$\mu A$
	MPSA43		$V_{CB}=160V, I_E=0$	-	-	0.1	
Emitter Cut-off Current	MPSA42	$I_{EBO}$	$V_{EB}=6V, I_C=0$	-	-	0.1	$\mu A$
	MPSA43		$V_{EB}=4V, I_C=0$	-	-	0.1	
DC Current Gain	* $h_{FE}$		$I_C=1.0mA, V_{CE}=10V$	40	-	-	
			$I_C=10mA, V_{CE}=10V$	40	-	-	
			$I_C=30mA, V_{CE}=10V$	40	-	-	
Collector-Emitter Saturation Voltage		* $V_{CE(sat)}$	$I_C=20mA, I_B=2.0mA$	-	-	0.5	V
Base-Emitter Saturation Voltage		* $V_{BE(sat)}$	$I_C=20mA, I_B=2.0mA$	-	-	0.9	V
Transition Frequency		$f_T$	$V_{CE}=20V, I_C=10mA, f=100MHz$	50	-	-	MHz
Collector Output Capacitance	MPSA42	$C_{ob}$	$V_{CB}=20V, I_E=0, f=1MHz$	-	-	3.0	pF
	MPSA43			-	-	4.0	

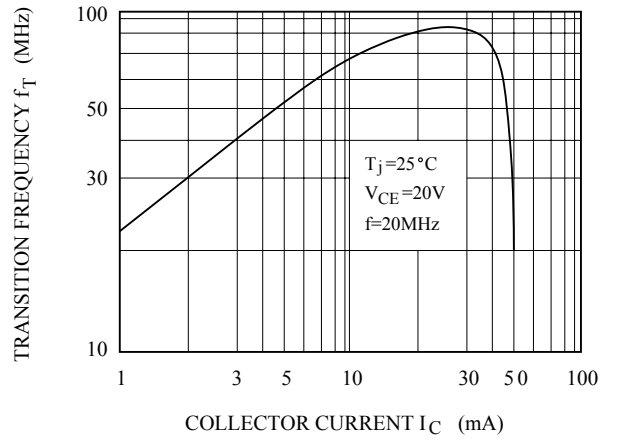
\*Pulse Test : Pulse Width  $\leq 300\mu S$ , Duty Cycle  $\leq 2.0\%$

# MPSA42/43

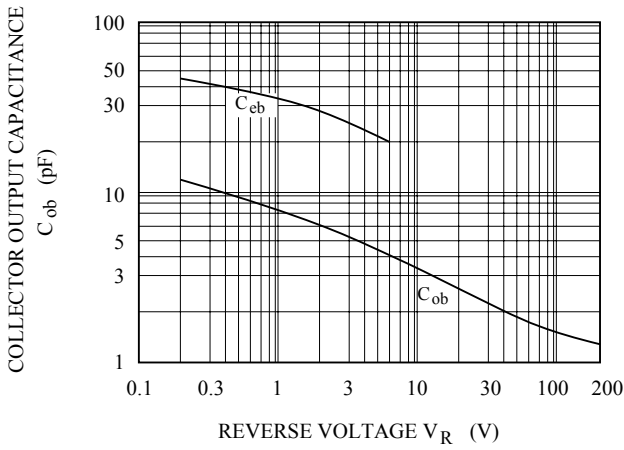
$h_{FE} - I_C$



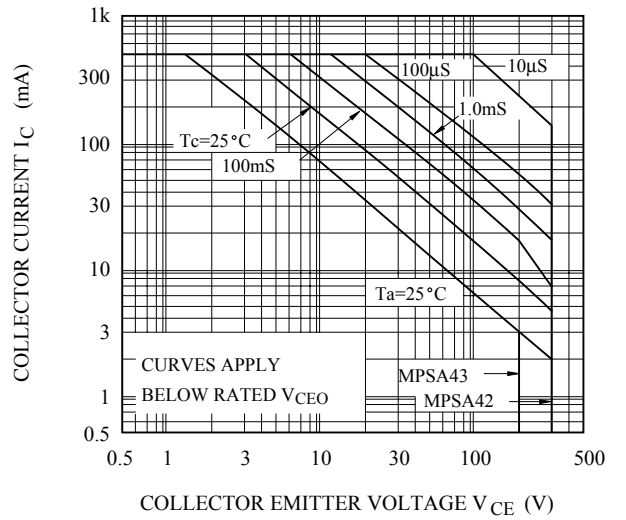
$f_T - I_C$



$C_{ob} - V_R$



$I_C - V_{CE}$



$V_{BE(sat)}, V_{CE(sat)} - I_C$

