

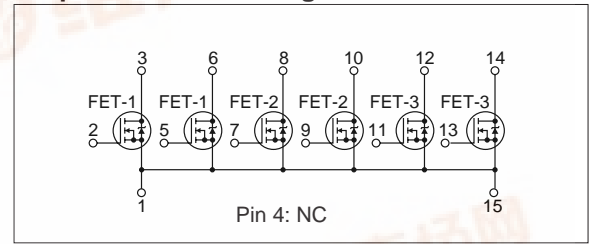
## Absolute maximum ratings

( $T_a=25^\circ\text{C}$ )

Symbol	Ratings			Unit
	FET1	FET2	FET3	
$V_{DSS}$	150			V
$V_{GSS}$	+20, -10			V
$I_D$	$\pm 7$	$\pm 5$	$\pm 7$	A
$I_D(\text{pulse})^*$	$\pm 15$	$\pm 10$	$\pm 15$	A
$P_T$	5 ( $T_a=25^\circ\text{C}$ , with all circuits operating, without heatsink)			W
	35 ( $T_c=25^\circ\text{C}$ , with all circuits operating, with infinite heatsink)			W
$\theta_{j-a}$	25 (Junction-Air, $T_a=25^\circ\text{C}$ , with all circuits operating)			$^\circ\text{C/W}$
$\theta_{j-c}$	3.57 (Junction-Case, $T_c=25^\circ\text{C}$ , with all circuits operating)			$^\circ\text{C/W}$
$V_{ISO}$	1000 (Between fin and lead pin, AC)			Vrms
$T_{ch}$	150			$^\circ\text{C}$
$T_{stg}$	-40 to +150			$^\circ\text{C}$

\* $PW \leq 100\mu\text{s}$ ,  $duty \leq 50\%$

## Equivalent circuit diagram



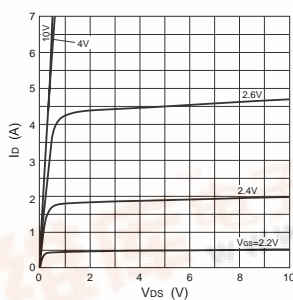
## Electrical characteristics

( $T_a=25^\circ\text{C}$ )

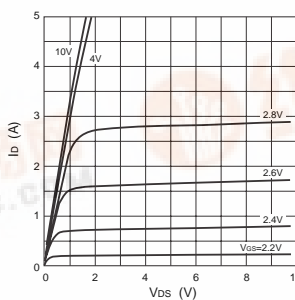
Symbol	FET1				FET2				FET3			
	Specification			Unit	Specification			Unit	Specification			Unit
	min	typ	max		min	typ	max		min	typ	max	
$V_{(BR)DSS}$	150			V	150			V	150			V
$I_{GSS}$			100	nA			100	nA			100	nA
$I_{DSS}$			100	$\mu\text{A}$			100	$\mu\text{A}$			100	$\mu\text{A}$
$V_{TH}$	1.0		2.0	V	1.0		2.0	V	1.0		2.0	V
$R_{e(yfs)}$	7	12		S	3	5.5		S	4	9		S
$R_{DS(ON)}$		80	105	m $\Omega$		330	440	m $\Omega$		150	200	m $\Omega$
		85	115	m $\Omega$		370	480	m $\Omega$		170	230	m $\Omega$
$C_{ISS}$	1600			pF		380		pF		870		pF
$C_{OSS}$	380			pF		95		pF		320		pF
$C_{RSS}$	90			pF		25		pF		210		pF
$t_{d(on)}$	35			ns		25		ns		25		ns
$t_r$	70			ns		50		ns		55		ns
$t_{d(off)}$	125			ns		55		ns		80		ns
$t_f$	90			ns		40		ns		50		ns
$V_{SD}$	1.0	1.5		V	1.1	1.5		V	1.0	1.5		V
$t_{rr}$		320		ns		180		ns		500		ns

## Characteristic curves

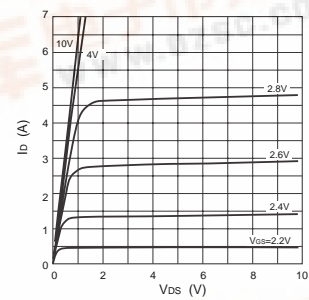
$I_D$ - $V_{DS}$  Characteristics (Typical)



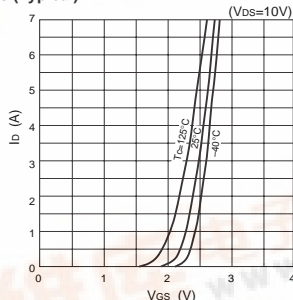
FET2



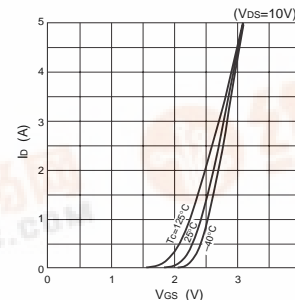
FET3



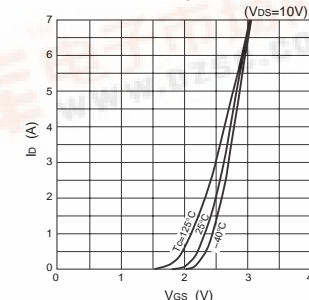
$I_D$ - $V_{GS}$  Characteristics (Typical)



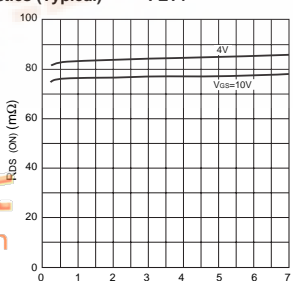
FET2



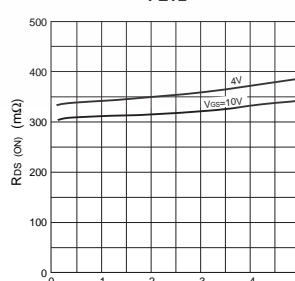
FET3



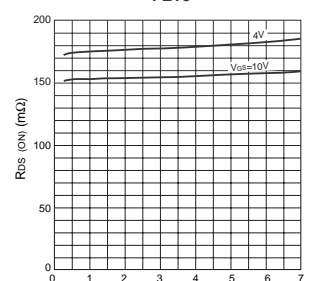
$R_{DS(ON)}$ - $I_D$  Characteristics (Typical)



FET2

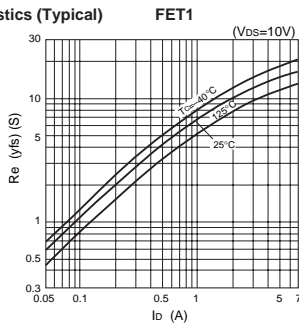


FET3

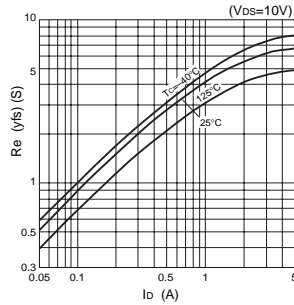


# SLA5054

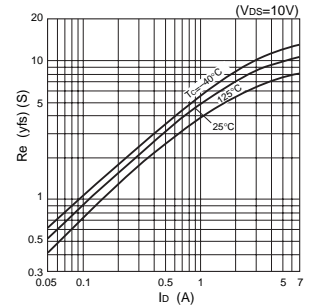
Re(f<sub>s</sub>)-I<sub>D</sub> Characteristics (Typical)



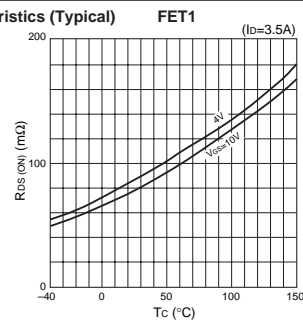
FET2



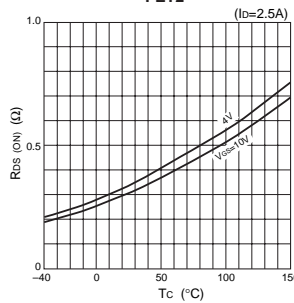
FET3



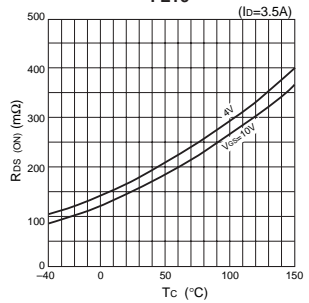
R<sub>DS(on)</sub>-T<sub>C</sub> Characteristics (Typical)



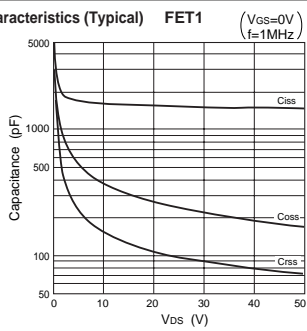
FET2



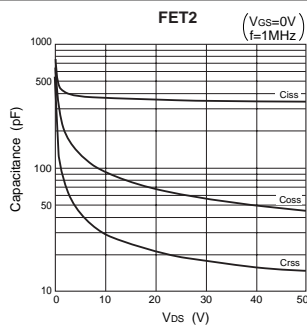
FET3



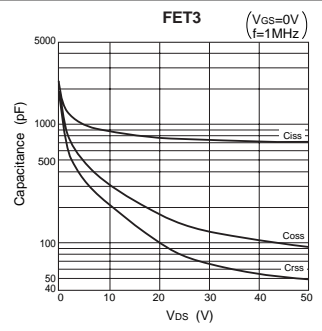
Capacitance-V<sub>DS</sub> Characteristics (Typical)



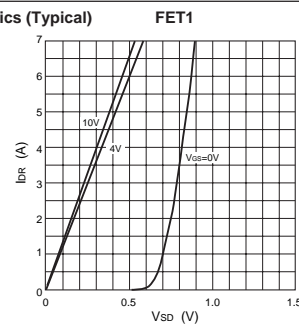
FET2



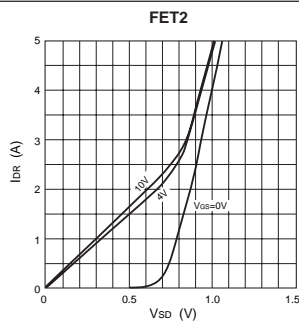
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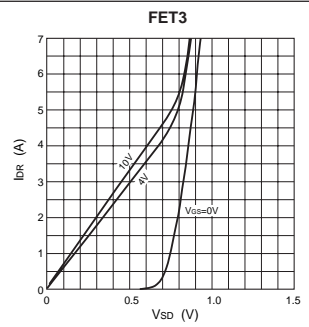
I<sub>DR</sub>-V<sub>SD</sub> Characteristics (Typical)



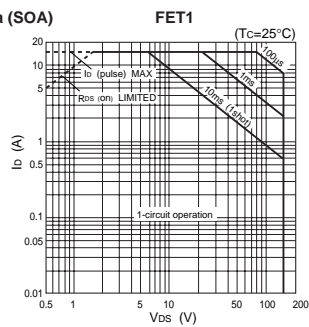
FET2



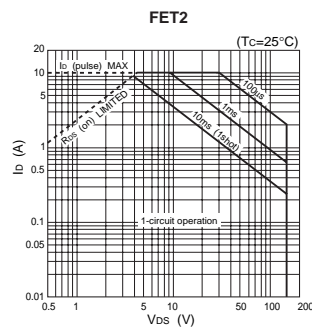
FET3



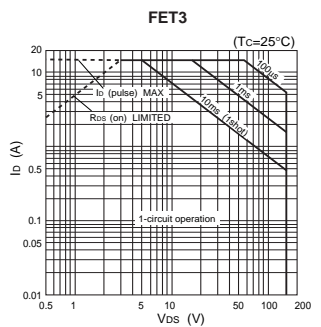
Safe Operating Area (SOA)



FET2



FET3



P<sub>r</sub>-T<sub>a</sub> Characteristics

