

March 1997

**TPICxxx DMOS ARRAYS FOR HDD APPLICATIONS**

PART NUMBER	VCM						SPINDLE					
	$T_C = 25^{\circ}\text{C}$		$T_C = 125^{\circ}\text{C}$		$I_D$	$I_{DM}$	$T_C = 25^{\circ}\text{C}$		$T_C = 125^{\circ}\text{C}$		$I_D$	$I_{DM}$
	$R_{DS(ON)}$		$R_{DS(ON)}$				$R_{DS(ON)}$		$R_{DS(ON)}$			
	(typ)	(max)	(typ)	(max)			(typ)	(max)	(typ)	(max)		
TPICxxxx	(mΩ)	(mΩ)	(mΩ)	(mΩ)	(A)	(A)	(mΩ)	(mΩ)	(mΩ)	(mΩ)	(A)	(A)
1501A	100	120	140	180	3	12	400	450	560	650	1.5	6
1502	250	300	425	510	1.5	4	400	500	TBD	850	1.5	4
1503	100	120	125	180	3	12	270	300	340	400	1.5	6
1504	250	300	400	475	1.5	6	150	175	TBD	275	2	8
1505	250	300	400	475	1.5	6	400	475	630	750	1	4
1211	100	150	TBD	TBD	4	12	n/a	n/a	n/a	n/a	n/a	n/a
1311	n/a	n/a	n/a	n/a	n/a	n/a	100	150	TBD	TBD	4	12

The TPIC150x family of Power+ Array™ devices are 20 V monolithic power DMOS arrays designed to provide the high power levels required in today's high-performance HDDs. Each device consists of ten electrically isolated N-channel enhancement-mode power DMOS transistors. Four of the FETs are configured as a full H-bridge with an integrated sense-FET to allow biasing of the VCM bridge in class A-B operation. The remaining six FETs are configured as three half H-bridges to drive the spindle motor.